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THE LEADERSHIP BEHAVIOR OF SCHOOL SUPERINTENDENTS

The Perceptions and Expectations of Board Members, Staff Members, and Superintendents

by

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FOREWORD

This is the fourth publication in the School-Community Development Study monograph series. It reports the procedure and findings of a study of the leadership behavior of fifty school superintendents as seen by members of the board of education, staff members and the superintendents themselves. The study stems from the assumption that the leadership behavior of the designated leader is affected by the expectations and perceptions of the reference groups with which he works. Incompatibility between the expectations of board members and teachers, for example, poses a problem for the superintendent. Likewise, a lack of agreement between these two groups in their perceptions of how the superintendent actually behaves further complicates his problem.

It is evident from the contents of this report that neither of the three groups--board members, staff, superintendents--adequately describesthe superintendent's behavior. The descriptions of all three groups are required to provide a complete picture. It is pointed out that the role which superintendents adopt in working with board members is different from that which they adopt in working with the staff. This is evidence of the fact that he is conscious of human relations problems with which he is confronted in dealing with reference groups. It also emphasizes the need for better understanding of the nature of these problems. This monograph makes an important contribution to this understanding by describing two significant dimensions in the leadership behavior of school administrators: initiating structure and consideration. Both the practitioner and the theorist will be interested in the author's graphic presentation of the effective administrator as plotted against these axes.

The researcher will be interested in noting the research procedure employed in this study. The treatment of the data is unique and represents a contribution to statistical analysis. The adaptation of the Leader Behavior Description Questionnaire to measurement of leadership behavior in school administration is another important contribution to the literature in this field. Both the methodology and the findings of this study provide us with new insights into the problems of educational administration.

John A. Ramseyer
Director

ACKNOWLEDGMENTS

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CHAPTER I

LEADER BEHAVIOR

This study of the leadership behavior of the superintendents of fifty Ohio schools deals with three sets of relationships:

1. The relationship between descriptions of the superintendent's behavior as a leader obtained from the members of his board of education, the members of his immediate staff,[1] and the superintendent himself.

2. The relationship between the expectations of the board members, the staff, and the superintendent himself in respect to how he should behave as a leader.

3. The relationship between descriptions of how the superintendent actually behaves as a leader and expectations of how he should behave.

The superintendent, as the officially designated leader in charge of the school organization, is confronted by two major sets of responsibilities. He is responsible to the board of education, but he must also be responsive to the members of his own professional staff. Both reference groups, the board and the staff, impose upon him expectations of how he should behave as a leader. When these expectations are essentially similar, he probably encounters no difficulty in orienting his behavior to them. But to the extent that they are incompatible, he is placed in a position of potential role conflict. How should he behave as the leader? Should he respond principally to the expectations of his board or to those of his staff? Or should he "be his own man" and persist in his own style of leadership irrespective of what either board or staff may wish? These practical questions plague most school administrators and are of equal concern to those responsible for their preservice and in-service training.

Before we attempt to answer questions of this kind, however, we must first gather more dependable, empirical information than we now possess about the leader behavior and leadership ideology of superintendents. In addition to knowing how board members and staff members believe that a superintendent should behave, we need to understand how they perceive that the superintendent does behave. Is there agreement among board members in their description of how the superintendent functions as a leader? Among staff members? Do the board and the staff agree in their perception of the superintendent's behavior as a leader? And what about the superintendent himself? Does his own description of his behavior correspond with the descriptions of it given by his board and staff? It is to questions of this sort that the present study is addressed.

---

[1] Throughout this report, the term "staff" will be used in a general sense, as when we refer to a "teaching staff," and not with the strict and proper connotation of "staff" as distinguished from "line" personnel.

The primary purpose of this inquiry is not to evaluate the effectiveness of the superintendent's leader behavior but simply to determine the relationship between his own perception of how he behaves, the board's perception, and the staff's; and to ascertain the corresponding relationship between his own beliefs and those of the board, and the staff concerning how he should behave as a leader. If the administrator, his board, and his staff agree about his actual behavior, and likewise about his ideal behavior, then we shall be blessed with a happy coincidence and shall have a firm base upon which to construct a program of leadership training. On the other hand, if we should discover a lack of agreement, not only in respect to the expectations of how the superintendent should behave, but also in the perception of his behavior, our training task will be more complex. Whether simple or involved, a training program for administrators is worthless unless its rationale is in accord with conditions that actually define the superintendent's leadership role. Our purpose is to secure dependable information about these conditions, and specifically about the leader behavior and leadership ideology of the administrator. Basic information of this kind will permit us to plan our formal training programs more wisely, and should be of immediate practical use to the superintendent on the job--in helping him to understand more clearly the specific conflicts inherent in his leadership role. Although we shall be concerned primarily with the descriptions of the superintendent's behavior, we also shall explore the possibility of using these descriptions for purposes of evaluation.

This investigation is closely related to the whole question of evaluating the performance of school superintendents. Objective measures of the superintendent's job performance or of the "effectiveness" of his leadership are extremely rare, for the development of such measures is a sorely neglected area of research. Evaluations of the superintendent's job performance customarily take the form of subjective ratings of his effectiveness. These ratings are seldom made with the help of a well-constructed rating schedule that elicits evaluations of his performance in specified areas of his job; instead, they usually entail little more than global judgments of whether the superintendent's performance is "good" or "bad." This is not the place to explore the ramifications of the criterion problem in educational administration. Suffice it at this juncture to raise one troublesome question: If we discover an appreciable lack of relationship between the descriptions of the superintendent's behavior given by his board members and by his staff, and also find that the agreement among board members about how the superintendent behaves is far less than perfect, with what degree of confidence can we then accept, as a dependable criterion of the superintendent's performance, an evaluation of his behavior given by a single board member?

Accurate and judicious evaluation of an individual's performance admittedly involves a more complex process than a straightforward description of what he does--of how he behaves. A valid criterion of ideal behavior should provide the foundation for whatever evaluation is made of the effectiveness of the behavior of a particular individual. Hence to the extent that a given rater's information about how a person does behave is unreliable, his evaluation of the effectiveness of that behavior is suspect. In short, if board members do not possess sufficient information about how the superintendent actually behaves to permit them to describe his behavior consistently among themselves and in reasonable agreement with the consensus of staff members, then a serious question can be raised about using board members' evaluations of the superintendent as the sole criterion of how effectively he performs his job. There is need for empirical research designed to explore this aspect of the criterion problem. Obviously, the present investigation can provide no definitive answer on this score. Nevertheless, we shall examine our findings in terms of the question: What are the implications of these results for improving our present methods of evaluating the job performance of superintendents?

Leader Behavior

Leadership, as Gibb (12) and Stogdill (34) have indicated in their excellent surveys of the research literature, is a complex social phenomenon that cannot be treated meaningfully when conceived as an isolated trait or entity viewed apart from related situational factors. In the present context, therefore, we shall not concern ourselves with leadership as an alleged attribute of an individual's behavior, but instead we shall deal with leader behavior defined as the behavior of the formally designated leader of a specified work-group. By definition, we shall designate all superintendents as leaders. The work-group in each case will be those members of the superintendent's staff who report directly to him. In a small school these will be the teachers themselves; in a larger school, the assistant superintendent, area supervisor, principals, and other specialized personnel.

Having designated all the superintendents as leaders, our next concern is to measure their behavior in the leadership role. Because we can never measure all the behavior of an individual, whatever measurement procedure we adopt will entail some form of selection. In the present instance we have chosen to measure two specific dimensions of leader behavior, "Initiating Structure" and "Consideration." Initiating Structure refers to the leader's behavior in delineating the relationship between himself and members of the work-group, and in endeavoring to establish well-defined patterns of organization, channels of communication, and methods of procedure. Consideration refers to behavior indicative of friendship, mutual trust, respect, and warmth in the relationship between the leader and the members of his staff.

These dimensions of leader behavior were identified on the basis of earlier research with a Leader Behavior Description Questionnaire devised by the Personnel Research Board at The Ohio State University. Hemphill, and Coons (22) constructed the original form of this questionnaire; and Halpin and Winer (18), in reporting the development of an Air Force adaptation[2] of this instrument, have identified Initiating Structure and Consideration as two fundamental dimensions of leader behavior. These dimensions were delineated on the basis of a factor analysis of the Leader Behavior Description Questionnaire responses of three hundred crew members who described the behavior of their 52 B-29 aircraft commanders. This solution of the iterative analysis (36) was guided by a few tentative ideas about the dynamics of leadership. Initially, in the search for a solution to the analysis, a number of "blind" rotations of the axes were made, but to no avail. In each instance only a single large general factor emerged. This factor probably reflected merely a general, vague evaluation of the commander, and contained a sizable but undefined halo effect. Since the various blind analyses had proven futile, we posited the Initiating Structure and the Consideration dimensions of leader behavior. When the axes were then rotated in respect to these posited dimensions, the empirical data were found to fit the hypothesis. The two dimensions accounted for approximately 34 and 50 per cent respectively of the common variance.

There is nothing especially novel about these two dimensions of leader behavior, for the principles embodied in the concepts of Initiating Structure and Consideration probably have always been used by effective leaders in guiding their behavior with group members; while the concepts themselves, with different labels perhaps, have been invoked frequently by philosophers and social scientists to explain leadership phenomena. Practical men know that the leader must lead--must initiate action and get things done. But because he must accomplish his purposes through other people, and without jeopardizing the intactness or integrity of the group, the skilled executive knows that he must maintain good "human relations" if he is to succeed in furthering the purposes of the group.

---

[2] Halpin has discussed elsewhere (13) certain methodological advantages of conducting this research in the air-crew situation.

Thus the investigators responsible for the personnel assessment program of the Office of Strategic Services during the Second World War have defined leadership as "a man's ability to take the initiative in social situations, to plan and organize action, and in so doing to evoke co-operation" (28, p. 301). These two aspects of leader behavior--Consideration and Initiating Structure--parallel the two objectives of every group, as they have been described by Cartwright and Zander:

> It appears that most, or perhaps all, group objectives can be subsumed under one of two headings: (a) the achievement of some specific group goal, or (b) the maintenance or strengthening of the group itself. Examples of member behaviors that serve functions of goal achievement are "initiates action," "keeps members' attention on the goal," "clarifies the issue," "develops a procedural plan," "evaluates the quality of work done," and "makes expert information available." Examples of behaviors that serve functions of group maintenance are "keeps interpersonal relations pleasant," "arbitrates disputes," "provides encouragement," "gives the minority a chance to be heard," "stimulates self-direction," and "increases the interdependence among members" (5, p. 541).

Similarly, Barnard, in his excellent analysis of the functions of the executive, has distinguished between the effectiveness and the efficiency of co-operative action:

> The persistence of co-operation depends upon two conditions: (a) its effectiveness; and (b) its efficiency. Effectiveness relates to the accomplishment of the cooperative purpose, which is social and non-personal in character. Efficiency relates to the satisfaction of individual motives, and is personal in character. The test of effectiveness is the accomplishment of a common purpose or purposes; effectiveness can be measured. The test of efficiency is the eliciting of sufficient individual wills to co-operate.
>
> The survival of co-operation, therefore, depends upon two interrelated and interdependent classes of processes: (a) those which relate to the system of co-operation as a whole in relation to the environment; and (b) those which relate to the creation or distribution of satisfactions among individuals.

> The instability and failures of co-operation arise from defects in each of these classes of processes separately, and from defects in their combination. The functions of the executive are those of securing the effective adaptation of these processes (1, pp. 60-61).

In short, if a leader--whether he be a school superintendent, an aircraft commander, or a business executive--is to be successful, he must contribute to both major group objectives goal achievement and group maintenance; or in Barnard's terms, he must facilitate co-operative group action that is both effective and efficient. According to the constructs that we have formulated, this means that the leader should be strong in Initiating Structure and should also show high Consideration for the members of his work-group.

Although the leader behavior dimensions we have proposed are not conceptually original, the method by which we have identified them affords empirical corroboration of their pertinence and factorial structure. Heretofore, these dimensions or their analogues have been promulgated on a priori grounds alone. Furthermore, the present empirical approach permits us to measure the leader behavior of a group leader as this behavior is perceived by the members of his immediate work-group. By measuring the behavior of leaders on the Initiating Structure and the Consideration dimensions, we can determine by objective and reliable means how specific leaders differ in leadership style, and whether these differences are related significantly to independent criteria of the leader's effectiveness and efficiency. In sum, the Leader Behavior Description Questionnaire offers a means of defining these leader behavior dimensions operationally,[3] and in so doing makes it possible for us to submit to empirical test additional specific hypotheses about leader and group behavior.

The Leader Behavior Description Questionnaire[4]

The Leader Behavior Description Questionnaire has gone through several revisions.[5] For the purpose of the present study we have modified the 80-item Air Force form for use with school superintendents (Appendix A). The questionnaire is composed of a series of short, descriptive statements of ways in which leaders may behave. The members of a leader's group indicate the frequency with which he engages in each form of behavior by checking one of five adverbs: always, often, occasionally, seldom, or never. Each of the keys to the dimensions contains 15 items,[6] and each item is scored on a scale from 4 to 0. Consequently, the theoretical range of scores on each dimension is from 0 to 60. The 15 items which define each dimension are listed below:

---

[3] This refers to operational definitions in science as described by Bridgman (4).

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[5] These revisions and the selection of items for the present form have been described in detail by Halpin and Winer (18).

INITIATING STRUCTURE

1. He makes his attitudes clear to the staff.
2. He tries out his new ideas with the staff.
3. He rules with an iron hand.
4. He criticizes poor work.
5. He speaks in a manner not to be questioned.
6. He assigns staff members to particular tasks.
7. He works without a plan.*
8. He maintains definite standards of performance.
9. He emphasizes the meeting of deadlines.
10. He encourages the use of uniform procedures.
11. He makes sure that his part in the organization is understood by all members.
12. He asks that staff members follow standard rules and regulations.
13. He lets staff members know what is expected of them.
14. He sees to it that staff members are working up to capacity.

---

[6] The other fifty items pertain to two other dimensions that have not been fully developed at this time, Production Emphasis and Social Awareness. Production Emphasis refers to a manner of motivating the group to greater activity by emphasizing the mission or job to be done. Social Awareness (Sensitivity) appears to measure the leader's sensitivity to and awareness of social interrelationships and pressures existing both inside and outside the group. It may represent activities on the part of the leader which often have been referred to as "sizing up the situation." This factor does not indicate the extent to which the leader acts in accord with these insights but merely reflects his awareness of social pressures originating either within or outside the group. One must distinguish between awareness of these social pressures and taking appropriate action in respect to them.

15. He sees to it that the work of staff members is co-ordinated.

*Scored negatively.

CONSIDERATION

1. He does personal favors for staff members.
2. He does little things to make it pleasant to be a member of the staff.
3. He is easy to understand.
4. He finds time to listen to staff members.
5. He keeps to himself.*
6. He looks out for the personal welfare of individual staff members.
7. He refuses to explain his actions.*
8. He acts without consulting the staff.*
9. He is slow to accept new ideas.*
10. He treats all staff members as his equals.
11. He is willing to make changes.
12. He is friendly and approachable.
13. He makes staff members feel at ease when talking with them.
14. He puts suggestions by the staff into operation.
15. He gets staff approval on important matters before going ahead.

*Scored negatively.

The form on which the group members describe their leader's behavior is referred to as the "LBDQ-'Real,' Staff." With modified instructions, this same instrument may be used to measure the leader's own leadership ideology. On this form each item is worded in respect to how a leader *should* behave, and the leaders answer the questionnaire accordingly. This form will be designated as the "LBDQ-'Ideal,' Self." Similarly, we may ask the staff members to describe how they believe the leader *should* behave. Such scores will be termed "LBDQ-'Ideal,' Staff."

For the LBDQ-Real, Staff, the estimated reliability by the split-half method is .83 for the Initiating Structure scores and .92 for the Consideration scores. The corresponding estimates of reliability for the LBDQ-Ideal, Self are .69 and .66. It has been found in previous research with the LBDQ-Real that though group members may differ in their perception of the leader's behavior, they nevertheless agree sufficiently to warrant the use of the crew mean score on each dimension as a succinct and dependable index of the leader's behavior.[7]

For a sample of 254 aircraft commanders, the correlation between the LBDQ-Real scores on the two dimensions is .38; for a sample of 64 educational administrators, .13 (14). Hence the common variance between these two dimensions of leader behavior is approximately 14 per cent for commanders and 1 per cent for school administrators. These two kinds of behavior are relatively independent but not necessarily incompatible. Cartwright and Zander, for example, have observed that

> Any given behavior in a group may have significance both for goal achievement and for maintenance. Both may be served simultaneously by the actions of a member, or one may be served at the expense of the other. Thus, a member who helps a group to work cooperatively on a difficult problem may quite inadvertently also help it to develop solidarity. In another group, however, an eager member may spur the group on in such a way that frictions develop among the members, and even though the goal is achieved efficiently,[8] the continued existence of the group is seriously endangered (5, p. 541).

Leaders vary considerably in their leadership style. Some emphasize group goal achievement even to the detriment of group maintenance. Others follow an opposite pattern and stress group maintenance to such an extent that they sacrifice goal achievement. These styles obviously do not fall into a neat dichotomy. Various combinations occur. Accordingly, the two leader-behavior dimensions may be conceptualized best as a pair of co-ordinates with reference to which any leader's behavior (or leadership ideology) may be described (see Figure 1).

The two co-ordinates define four quadrants which, reading clockwise from twelve o'clock, are:

1. High Initiating Structure and High Consideration
2. Low Initiating Structure and High Consideration
3. Low Initiating Structure and Low Consideration

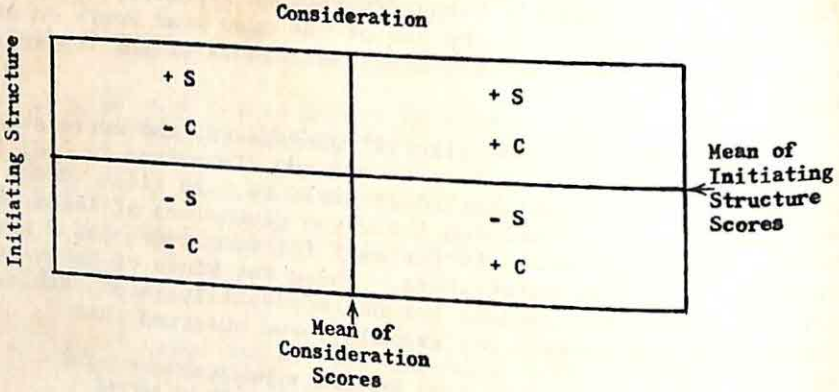
---

[7] "Between- vs. within-crew" analyses of variance of several independent sample consistently yield F ratios significant at the .01 level for both dimensions.

[8] In Barnard's terminology, this would read "effectively" rather than "efficiently."

Figure 1

Initiating Structure and Consideration as Co-ordinate Dimensions of Leader Behavior


Consideration
Initiating Structure
+ S
- C
+ S
+ C
- S
- C
- S
+ C
Mean of Initiating Structure Scores
Mean of Consideration Scores

4. High Initiating Structure and Low Consideration

We have found that this scheme provides an especially useful way of thinking about the leader behavior of the officially designated leader of a specified work-group.

Leader Behavior and Leadership

The leader-behavior dimensions of Initiating Structure and Consideration are not to be conceived as "traits" of leadership. They simply describe the behavior of a leader as he operates in a given situation. Stogdill (34) has shown that the trait approach to leadership, as it has been used in most studies reported in the literature, has yielded negligible, and often contradictory, results. Sanford has aptly summarized the situation:

> From all these studies of the leader we can conclude, with reasonable certainty, that:
>
> (a) there are either no general leadership traits or, if they do exist, they are not to be described in any of our familiar psychological or common sense terms,
>
> (b) in a specific situation, leaders do have traits which set them apart from followers, but *what* traits set *what* leaders apart from *what* followers will vary from situation to situation (31, p. 51).

In short, the behavior of leaders varies widely from one leadership situation to another. In this connection, Hemphill (21), in an elaborate and careful study of approximately five hundred assorted groups, has demonstrated empirically that variance in leader behavior is significantly associated with situational variance. For example, let us consider the size of the group as a situational determinative. Hemphill has analyzed in detail the relation between the leader's behavior and the size of the group, and has concluded that, as compared with small groups, large groups make more, and different, demands upon the leader. In general, the leader in a large group tends to be impersonal, and is inclined to enforce rules and regulations firmly and impartially. In smaller groups the leader plays a more personal role. He is more willing (and perhaps also more able) to make exceptions to rules and to treat each group member as an individual.

On the whole, current research appears to support the "situational" in contrast to the "trait" approach in the study of leader behavior. Nothing in the findings of the research with the Leader Behavior Description Questionnaire thus far completed contradicts this "situational" position. The questionnaire measures the leader's behavior in a specified situation, e.g., as a superintendent of schools, as an aircraft commander, or as a factory foreman, but does not purport to measure an intrinsic capacity for leadership. The extent to which superintendents--or any other leaders--tend to employ the same style of leader behavior in different situations (i.e., in different school systems, or in dealing with parent groups rather than teacher groups) is an empirical question that still remains to be answered.

The distinction between "leader behavior" and "leadership" is more than merely academic, for which term we choose determines the kind of questions we ask, and for this reason also dictates the form our answers will take. For example, to ask "What is leadership?" presupposes the existence of a specified capacity in regard to "leading." This question predicates within the individual an attribute or inherent characteristic of behavior, and implies further that this attribute, like intelligence or clerical aptitude, functions with equal force in a variety of situations. A question so phrased also suggests that individuals differ in their capacity, or potential, for "leadership" and that this potential is probably determined by intrinsic factors in the person. It is an easy step from this position to the inference that this potential is identifiable and hence measurable--that some individuals possess it in high degree and others in lesser degree; and that if we can only discover how to measure it, we shall be able to screen the "leaders" from the "non-leaders." Those who hold this view tend to set little store by the prospect of training individuals in leader-behavior skills, for when leadership is conceived principally as an inherent capacity or potentiality, there is meager justification for devoting time to training for it.

The chief personnel task becomes one of discovering the proper formula for identifying and measuring leadership "ability."

In contrast, consider the concept of "leader behavior" and what it implies. First of all, it focuses upon observed behavior rather than upon a posited capacity inferred from this behavior. No presuppositions are made about a one-to-one relationship between leader behavior and an underlying capacity or potentiality presumably determinative of this behavior. By the same token, no a priori assumptions are made that the leader behavior which a leader exhibits in one group situation will be manifested in other group situations. It may be; but the answer to this question is left open for empirical verification rather than incorporated as an implicit assumption into the very terminology we use to define our problem. Nor does the term "leader behavior" suggest that this behavior is determined either innately or situationally. Either determinant is possible, as is any combination of the two, but the concept of leader behavior does not itself predispose us to accept one in opposition to the other. With attention focused upon behavior rather than capacity, there is greater promise of the possibility of training individuals in specified forms of leader behavior. Changes in behavior can presumably be induced through appropriate training, but the concept of capacity, by definition, implies a fixed level of ability and hence thrusts the burden of personnel determination upon selection, not training.

We must also recognize a further advantage of the concept of leader behavior over that of leadership. In ordinary parlance the term "leadership" is used in an evaluative sense. To say that a man displays leadership implies that this is "good" or "effective" leadership. But the evaluation of what the leader does is only one aspect of our research objective. The primary task is to describe the behavior of the leader on psychologically meaningful dimensions. If a description of the leader on specific dimensions of behavior and an evaluation of the effectiveness and efficiency of that behavior can be obtained independently, then we can ascertain to what extent each dimension contributes to favorable evaluation. Furthermore, we can determine whether this contribution changes when the source or criterion of evaluation is changed. This separation of the *description* of what the leader does from the *evaluation* of the effectiveness and efficiency of what he does is of signal importance. Because it focuses upon the description of behavior, the leader behavior concept makes it easier for us to distinguish between (a) what the leader does, and (b) how what he does is evaluated. What is more, this distinction also reveals the pertinence of two related questions about the leader's behavior: "As described *by whom*?" and "As evaluated *by whom*?" The first of these two questions defines the sphere of the present inquiry. Specifically, to what extent do board members, staff members, and superintendents themselves agree in their descriptions of the superintendent's leader behavior? Similarly we may obtain an indirect check on the similarity of the evaluations of this behavior by asking these same respondents how they believe an ideal superintendent _should_ behave. We shall scarcely expect agreement in the evaluation of a superintendent's behavior if we discover an appreciable lack of agreement in the straightforward description of how he does behave.

It should be noted, however, that the concept of leader behavior does not preclude the possibility that certain behaviors, or specified social skills, are more closely associated with effective (and efficient) leader behavior than others. Nor does this concept shut out the possibility that leaders can, to some extent, transfer their skills from one group situation to another. The nature of the concept is such that these possibilities are neither denied nor affirmed, but the way is left open to determine inductively to what extent, and under what conditions, each of these premises is supported by empirical evidence. This is the crux of the difference between the concepts of leader behavior and leadership. From the leader behavior point of view we treat these possibilities as hypotheses to be subjected to empirical test; from the leadership point of view, these same possibilities are posited gratuitiously as premises.

Historically, in most disciplines there is a tendency for new movements or emphases to arise in revolt against the orthodoxies of a given period. These new movements later tend to crystallize into the orthodoxies of the next period, and fresh countermovements arise in turn. The final position is usually one on middle ground between the original orthodoxy and the first reaction against it. Zig-zag movements of this kind are not uncommon in the progress of science. Leadership research is currently in the process of following this type of developmental course. Early research was marked by a search for traits of leadership that would discriminate between leaders and non-leaders. The situational emphasis which has characterized research during the past decade arose as a protest against the earlier trait approach, but in some respects this present emphasis may have been carried to excess. To say that leader behavior is determined exclusively by situational factors is to deny freedom of choice and determination to the leader. This violates common sense and experience. Even now, within research circles, a gradual but growing counterreaction is taking shape--a drawing away from the extreme situational position, with increasing recognition that the truth probably lies in an area of middle ground. In appraising the trait approach anew, we now have the advantage of a fresh perspective. In the next decade research workers may be less avid in seizing upon convenient phenotypic data as pertinent variables, and more willing to explore the relevance of genotypic variables that are not as readily discernible as "givens."[9] In short, in the past we have tended to examine essentially peripheral traits and attributes, but, although we have been guided by intuition about possible relationships between these attributes of leaders and other leadership phenomena, we have operated, for the most part, without the benefit of sufficient empirical information about leadership phenomena to enable us to sharpen our definitions of the variables involved. Situationally oriented leadership research has served to suggest new ways of constituting the more crucial variables that pertain to the individual as a leader. Eventually it may be possible to define a few variables of a genotypic order that will prove predictive of leader behavior in a variety of situations. For example, McClelland's (27) series of studies on the achievement motive may throw new light on leader behavior. Hemphill and his co-workers (24) are currently conducting a series of experiments on small groups in order to determine the relationship between (a) Need Achievement and Need Affiliation, and (b) the frequency with which group members attempt leadership acts. With the accumulation of a fund of experimental evidence in this area, the new theories of leadership that are generated probably will incorporate ideas which, at least superficially, will resemble those that characterized the original trait approach. The difference in conceptual sophistication is likely, however. to be no less profound than that between pre-Einsteinian and post-Einsteinian physics. All this, of course, rests with the future. The point is made at this juncture simply to underscore one salient feature of good research strategy--that it is sometimes wise to move backwards (or at least in a direction that appears to be backwards) in order to insure greater and more sure-footed strides into the future.

These, then, are the reasons why we prefer _at this time_ to think in terms of leader behavior rather than leadership. We have no intention of inviting an awkward use of language by abjuring the word "leadership." There is, for example, no objection to using this term adjectivally in referring to leadership acts, leadership ideology, leadership skills, or even leadership behavior. What we wish to avoid is the use of the word in a sense that implies the existence of an unidimensional attribute, capacity, or power. To speak of leadership as an entity of any kind is nonsense. The basic phenomena with which we deal are leadership _acts_, or the _behavior_ of leaders and their group members. From observations of the ordering of this behavior, its regularities and irregularities, we can make inferences and establish constructs. These constructs are extremely useful both for practical and theoretical purposes, provided one prime requirement is completely and consistently fulfilled--that the constructs are never reified and treated as entities in the "real" world.

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[9] The distinction between a phenotypic and a genotypic research approach is described by Lewin (26, Chap. I).

Our concept of leader behavior sidesteps a few important issues. It limits us, for instance, to dealing with formal organizations, and focuses attention exclusively upon the "head men" within these organizations. The whole question of the distribution of leadership acts among members of the group is avoided. Nor are our formulations readily adaptable to certain aspects of leadership phenomena that can be observed within informal community groups. Our only defense of such limitations is that we have had to start somewhere. We chose to start with the officially designated leaders of formal organizations. This was an heuristic decision. As more information is gathered and we gradually begin to build a systematic conceptual framework within which additional hypotheses about leader behavior may be tested, we shall, no doubt, test these hypotheses in informal as well as formal organizations, and with group members other than those officially designated as leaders. The fact that we have not explored these other leadership phenomena implies no skepticism of their importance but is simply an admission that we have not yet found the opportunity to investigate these equally challenging areas.

With this background on the theoretical predilections that have provided the impetus for the present study, we are now ready to examine the substantive findings of a series of related studies on leader behavior.

Research on Leader Behavior

Most of the developmental work on the Leader Behavior Description Questionnaire has been done in a series of studies of aircraft commanders. Related studies have been conducted, however, in industry and education. Fleishman (8, 9, 10) and Harris (19) have adapted the Air Force form of the instrument for use in industry, and Hemphill (20) and Halpin (14) have used it in educational settings. The industrial studies have been concerned primarily with training, and hence are not directly pertinent to our present purposes. In this section, therefore, we shall first summarize five of the Air Force studies and then describe in detail the findings of the two education studies.

Air Crew Studies:

1. LBDQ scores were obtained on 52 B-29 commanders during training in the fall of 1950, and 33 of these commanders were subsequently rated on their combat performance in flying over Korea during the summer

of 1951 (15). Twenty-nine of these 33 commanders were described again on the LBDQ by their combat crews. For 27 of the crews a Crew Satisfaction Index was computed on the basis of the members' answer to the question: "If you could make up a crew from among the crew members in your squadron, whom would you choose for each position?" The ratio between the number of nominations the incumbent commander received and the number of nominations made for the aircraft commander position was used as an index of the crew's satisfaction with the incumbent's leadership. The LBDQ scores in training were correlated with this index and with superiors' ratings of the commander's combat performance. Similarly, the LBDQ scores in the Far East Air Force were correlated with both the index and the ratings. Finally, in each situation--training and combat--partial correlations were computed for the relationship between each dimension and the ratings (or index) with the effect of the other dimension partialed out.

In both the training and combat situations a trend was found toward negative correlations between the superiors' ratings and the Consideration scores, and positive correlations between these ratings and the Initiating Structure scores. Conversely, the correlations between the Crew Satisfaction Index and the Consideration scores were positive and high. The partial correlations served to accentuate this trend, which was more pronounced in combat than in training. Thus superiors and subordinates are inclined to evaluate oppositely the contribution of the leader behavior dimensions to the effectiveness of leadership. This difference in evaluation would appear to confront the leader with conflicting role expectations.

2. Eighty-seven B-29 aircraft commanders, flying combat missions over Korea, were the subjects of a study with a design similar to the one reported (17). The commanders were rated by their superiors on seven characteristics (e.g., Effectiveness in Working with Others, Attitude and Motivation, Over-all Effectiveness), and by their crews on three: Confidence and Proficiency, Friendship and Co-operation, and Morale. Furthermore, as in the earlier study, a Crew Satisfaction Index was computed. The Consideration and the Initiating Structure scores were correlated with the ratings by superiors and by crew members, and with the Crew Satisfaction Index.

The ratings by superiors yielded significant correlations with the Initiating Structure scores whereas none of the corresponding Consideration correlations was significant. The crew ratings, including the Index, correlated significantly with both leader behavior dimensions but tended to be higher for the Consideration scores. Two of the Consideration correlations in particular should be noted: .75 with the Crew Satisfaction Index and .84 with the crew ratings of the commanders on "Friendship and Cooperation." Both correlations differ significantly from the corresponding correlations of .47 and .51 (in themselves significant at the .01 level) with the Initiating Structure scores.

One further hypothesis was tested in this study: that the commanders rated highest by their superiors would score above the means on both leader behavior dimensions whereas those commanders rated lowest by their superiors would score below the mean on both dimensions. The commanders had been rated on Over-all Effectiveness in Combat. Two groups of commanders were identified: 13 men in the upper 15 per cent of this rating distribution and 12 in the lower 15 per cent. For each group taken separately, the Consideration and the Initiating Structure scores were plotted into the four quadrants defined by co-ordinates corresponding to the means of the two leader behavior dimensions. These two scatterplots were then collapsed to construct the 2 x 2 classification presented in Figure 2.

The probability of occurrence of frequencies as deviant from the null hypothesis frequencies as those reported in Figure 2, or more deviant, is less than 3 in 100. This means that commanders who score above the average on both leader behavior dimensions are likely to be evaluated by their superiors as high in over-all effectiveness, whereas those who score below the average on both dimensions are likely to be rated low on this criterion. In short, the successful leader is the man who furthers both group maintenance and group achievement, or, in Barnard's terms, is not only *effective* in getting the job done but *efficient* in satisfying the motives of individual group members.

3. The members of 52 newly assembled B-29 crews at Combat Crew Training School described their commanders

Figure 2

Number of Commanders in High and Low Groups on Ratings of Over-all Effectiveness Scoring above and below the Mean on Both Leader Behavior Dimensions*

	Below Mean on Both Consideration and Initiating Structure	Above Mean on Both Consideration and Initiating Structure
Upper 15 Per Cent on Over-all Effectiveness	1	8
Lower 15 Per Cent on Over-all Effectiveness	6	2

*After Halpin (17, p. 15).

on the Leader Behavior Description Questionnaire and rated each other and the crews as units on such items as crew morale, friendship, proficiency, and willingness to go to combat with each other. These measures of crew attitudes were obtained twice--at the beginning of the training period and toward the end of training. An average period of 10 days intervened between two administrations of the questionnaire. Correlations were computed between changes in attitude and the Initiating Structure and Consideration scores on the Leader Behavior Description Questionnaire (6). It was found that the members of crews whose commanders were described as high on Consideration tended to increase their ratings of each other on such attitude items as "Mutual confidence," and "Willingness to go to combat together," and that the members of crews whose commanders were described as high on Initiating Structure tended to increase their ratings of each other on "Friendship" and "Confidence." It was concluded that during this initial period of crew assembly the members of crews whose commanders scored high on both Consideration and Initiating Structure tended to develop more favorable crew attitudes than the members of those crews led by commanders who scored low on both leader behavior dimensions. These findings indicate the influence of leadership style upon early group-learning experience.

4. Rush (30) has reported the relationship between the Leader Behavior Description Questionnaire scores of B-29 and B-50 aircraft commanders and "group dimension" measures of air crews drawn from three independent samples: Combat Crew Training School, Combat Crew Standardization School, and Far East Air Force.

> For each sample, crew means on the five (Crew Dimension Questionnaire)[10] dimensions were correlated with mean scores for the two LBDQ dimensions. Results were highly consistent across samples and appeared meaningful in terms of the definitions of the various dimensions. Perhaps the best way to summarize the results of this analysis is to discuss the correlations for each of the CDQ dimensions as follows:
>
> > Control--Scores on this dimension were negatively related to Consideration in all three samples, while the correlations with Initiating Structure were not significant. One possible interpretation of these results is that when crew members perceive the AC as a controlling agent, they construe his behavior as not considerate.
> >
> > Intimacy--Initiating Structure was not significantly related to this dimension but Consideration showed significant positive correlations. Crews which describe themselves as more intimate tend to judge their AC's as being more considerate.
> >
> > Harmony--Scores on this dimension correlated positively with Consideration while the correlations with Initiating Structure were not significant. This would seem to point to the influence of leader behavior in establishing certain interpersonal relationships among crew members. The amount of effort he spends in organizing crew relations and defining the roles of crew members doesn't seem to make much difference in the harmony of the crew. However, the way in which he goes about his duties does appear to be a factor in the development of compatible relationships.
> >
> > Procedural Clarity--This characteristic of crews, which refers to the way procedures and duties are defined for each crew member, was related to Initiating Structure in a positive direction. Correlations with Consideration were

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[10] Adapted from the Group Dimension Questionnaire described by Hemphill and Westie (23).

> not significant. Thus the manner in which the leader acts toward crew members does not appear significant in establishing a well-defined set of relationships among crew members. But the frequency with which he engages in acts construed as Initiating Structure is related to the clarity of duties and functions in the crew.
>
> Stratification--Scores on this dimension were highly related to Consideration in a negative direction, while correlations with Initiating Structure were not significant. In other words, crews which describe their leader as relatively less considerate tend to be characterized by greater awareness of status hierarchies within their crew.

> In general, these results point to the interaction between group dimensions and leader behavior. It seems clear that if we are to understand the psychological characteristics of crews, we must deal not only with what the AC does, but also how he does it. In air crews, the actions of the AC may set the style, so to speak, for the interpersonal relations of crew members (30, pp. 134-136).

In a study of 132 B-29 and B-50 commanders, a comparison was made between commanders' ideologies of leadership behavior and their crews' descriptions of their actual behavior in relation to the two leader behavior dimensions (16). The ideology scores were computed from the commanders' own responses to the LBDQ-Ideal. In expressing their leadership ideology, the commanders clearly recognized the desirability of scoring high on both dimensions of leader behavior, but the correspondence between their statements of how they should behave and their behavior as described by their crews was negligible. In the case of the Initiating Structure dimension, the correlation (17) did not differ significantly from zero; and although the corresponding correlation of .14 for the Consideration dimension was significant at the .05 level of confidence, this represented only a low degree of association. The moderate reliability of the Initiating Structure and Consideration scales, and the fact that the distributions are not entirely normal, probably contribute to the low magnitude of the correlations obtained. Nevertheless, the evidence suggests that the aircraft commander's knowledge of how he should behave as a leader has little bearing upon how he is perceived as behaving by the members of his crew.

Educational Studies:

1. The members of 18 departments in a liberal arts college described their department heads and indicated on the LBDQ-Ideal how they believed a department head should behave.[11] They also ranked the five departments in the college that had the general reputation on the campus of being best led or best administered and the five departments that were least well led or least well administered (20). In making these rankings, each respondent excluded his own department. The correlation between the reputation scores and the LBDQ-Real scores were .36 for Consideration and .48 for Initiating Structure, with .47 required for significance at the .05 level. When discrepancy scores--measuring the absolute difference between the Real and the Ideal scores on each of the leader behavior dimensions--were correlated with the reputation scores, the obtained coefficients, -.52 and -.55 respectively, were both statistically significant. The greater the departure of the actual behavior of the department head (on either leader behavior dimension) from the norm of how ideal behavior on this dimension was conceived by the members of his department, the poorer was the administrative reputation of the department.

   A cutting score of 41 on Consideration and 36 on Initiating Structure for the split on one coordinate, and the median reputation score for the split on the other, were used to distribute the 18 cases into quadrants as illustrated in Table I. The import of these data is clear: the departments with high reputation are those whose chairmen score high on both leader behavior dimensions.

2. Sixty-four superintendents of Ohio Schools[12] were compared with 132 aircraft commanders on both the LBDQ-Real and the LBDQ-Ideal (14). The two groups of leaders were found to differ significantly from each other, both in leader behavior and leadership ideology. The commanders tended to place greater emphasis upon Initiating Structure, and the superintendents greater emphasis upon Consideration.

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[11] Note that this use of the LBDQ-Ideal differs from that employed in the last study cited where the leader himself stated how he should behave. In Hemphill's study the "Ideal" is used with the group members who state how they believe the leader should behave.

[12] The fifty superintendents of the present study were included in this sample.

Table I

The Relationship between the Reputation Achieved by College Departments and the Consideration and Initiating Structure Scores of Department Chairmen Taken Conjunctively* (N=18)

Chairman's Leadership	Number of Chairmen	
	Below Median Reputation	Above Median Reputation
Score of 41 or larger on Consideration and a score of 36 or more on Initiating Structure	1	8
Score of less than 41 on Consideration or less than 36 on Initiating Structure	8	1

*After Hemphill (20).

For each dimension, the mean of the pooled samples, i.e., superintendents and commanders, was used as a co-ordinate, and the cases from each sample were distributed into the four quadrants defined by these two co-ordinates. An analysis was made of the difference between the number of superintendents and the number of commanders who scored in each quadrant. The findings are summarized in Table II.

The principal differences were found in the "off-quadrants." Those superintendents who scored in neither the highly effective nor the highly ineffective quadrant tended to cluster in the lower right-hand quadrant, and hence were characterized by high Consideration but low Initiation of Structure. Conversely, the commanders who scored in neither the highly effective nor the highly ineffective quadrant clustered in the upper-left quadrant, and were characterized by high Initiation of Structure and low Consideration. These findings indicate that the leaders in these two groups who are not effective differ systematically in their shortcomings. The aircraft commanders tend to show less Consideration than is desirable, whereas the superintendents tend to be remiss in not Initiating sufficient Structure. These differences, reflected in both leader behavior and leadership ideology, may be attributed to differences in the institutional settings within which the two groups

Table II

Number and Per Cent of Educational Administrators (N=64) and Aircraft Commanders (N=132) with LBDQ-Real Scores above and below the Mean on Initiating Structure and Consideration

Consideration

Initiating Structure	Below Mean			Above Mean			
Above Mean	EA	5	(7.8%)	EA	21	(32.8%)	
	AC	37	(28.0%)	AC	57	(43.2%)	Mean = 39.9
Below Mean	EA	8	(12.5%)	EA	30	(46.9%)	
	AC	29	(22.0%)	AC	9	(6.8%)	

Mean = 41.4

*After Halpin (14, p. 25).

of leaders operate. By tradition alone, the military would appear to encourage a greater polarization of authority in the officially designated work-group leader than is common in the field of public education.

Summary

It is appropriate at this point to summarize six principal findings of this series of leader behavior studies.

1. The evidence indicates that Initiating Structure and Consideration are fundamental dimensions of leader behavior, and that the Leader Behavior Description Questionnaire provides a practical and useful technique for measuring the behavior of leaders on these two dimensions.

2. Effective leader behavior is associated with high performance on both dimensions. The aircraft commanders rated highest by their superiors on "Overall Effectiveness in Combat," and the college department chairman whose departments are reputed to be well administered, are alike in being men who (a) define the role which they expect each member of the work-group to assume, and delineate patterns

of organization and ways of getting the job done, and (b) establish a relationship of mutual trust and respect between the group members and themselves.

3. There is, however, some tendency for superiors and subordinates to evaluate oppositely the contribution of the leader behavior dimensions to the effectiveness of leadership. Superiors are more concerned with the Initiating Structure aspects of the leader's behavior, whereas subordinates are more concerned with (or "interested in") the Consideration the leader extends to them as group members. This difference in group attitude appears to impose upon the leader some measure of conflicting role expectations.

4. Changes in the attitudes of group members toward each other, and group characteristics such as harmony, intimacy, and procedural clarity, are significantly associated with the leadership style of the leader. High Initiating Structure combined with high Consideration is associated with favorable group attitudes and with favorable changes in group attitude.

5. There is only a slight positive relationship between the way leaders believe they should behave and the way in which their group members describe them as behaving. For this reason, those engaged in leadership training programs should be especially wary of accepting trainees' statements of how they should behave as evidence of parallel changes in their actual behavior.

6. The institutional setting within which the leader operates influences his leadership style. For example, aircraft commanders as compared with school superintendents tend to Initiate more Structure and show less Consideration for the members of their groups. These two groups of leaders also show corresponding differences in their leadership ideology. The leaders in the two groups, i.e., superintendents and aircraft commanders, who are not effective differ in their shortcomings. The commanders tend to show less Consideration than is desirable, whereas the superintendents tend to be remiss in regard to Initiating Structure.

Impetus for the Present Study

This series of studies has provided the chief impetus for the present investigation of fifty Ohio school superintendents. Although the findings of these earlier investigations indicate that effective leaders are those whose performance is high both in Initiating Structure and Consideration, we are not directly concerned in our present effort with evaluating the superintendents whom we have studied. Our objective is simpler and, in one sense, more fundamental: to determine the relationship between the superintendent's own perception of how he behaves on the Initiating Structure and Consideration dimensions, the board's perception, and the staff's; and to discover the corresponding relationship between his, the board's, and the staff's beliefs concerning how he *should* behave as a leader. This, of course, implies several additional questions. To what extent do board members agree in their descriptions of the superintendent's behavior as a leader? How much agreement is there among staff members in their descriptions of the administrator's leader behavior? Is there greater agreement about how he *should* behave than about how he *does* behave? These are the major questions that we shall examine in this report.

CHAPTER II

PROCEDURE

Procedurally, the testing phase of the study had two purposes:

1. To secure descriptions of the leader behavior of the superintendent from:
    a. The superintendent
    b. Members of his faculty
    c. Members of his board of education
2. To secure from these same three sources descriptions of how an ideal superintendent should behave.

The Sample

The sample consisted of fifty Ohio school superintendents. Sixteen of these were city superintendents; 4, superintendents of exempted village schools; and 30, executive heads of local school districts. All the superintendents were men.

Initially, we compiled a list of one hundred superintendents from communities chosen according to geographic location in respect to the city of Columbus. This list included all schools in Franklin County and in the counties immediately adjacent to it. Additional communities were then added to the list from those proximate to an imaginary line drawn from Columbus to the northeast corner of the state. Dr. John A. Ramseyer, director of the School-Community Development Study, sent letters to the superintendents inviting them to participate in the study. Each letter was accompanied by a brief description of the study and its purpose. (Copies of this letter and of the study description are reproduced in Appendix B.) As a result of the initial letter, a follow-up letter, and several telephone calls, fifty superintendents agreed to participate in the program. Of those on the original list who did not agree to participate, 15 either wrote or telephoned to explain why they could not serve as subjects, whereas 35 failed to respond to either the original letter or the follow-up. The reasons given for inability to participate varied. The most frequent explanation was that the school and faculty schedule was too full and, since our request had come rather late in the school year, the superintendent did not think it feasible to impose this additional demand upon an already overburdened staff. In a few schools the board was in the midst of deliberations on a building program, and hence was unable to spare a meeting for our purpose. One board flatly refused to co-operate; another was willing to do so, but only on the condition that the pooled results of their description of the superintendent would not be made available to him. Because this stipulation ran counter to the spirit of the inquiry, this school was not included in the sample.

Technically, our sample of fifty superintendents is fortuitous rather than planned. Participation in the study imposed a minimum of three conditions: (a) the superintendent's personal willingness to serve as a subject; (b) a schedule of staff activities that did not make it infeasible to ask a group of teachers to meet after school hours to answer the questionnaire, and (c) the consent of the board to sanction the superintendent's participation and to devote one of its own evening meetings to the questionnaire.

Let us examine a few implications of the superintendent's willingness to serve as a subject. To do this, he had to expose himself to the risk involved in inviting the focus of his staff's and board's attention upon his own leadership behavior. Furthermore, he made this decision before he saw the Leader Behavior Description Questionnaire, and hence without knowledge of the specific content of the questionnaire items. Comments made by the superintendents in our informal interviews with them impressed us with both their willingness to contribute to research for research's sake and their forthright interest in learning how their leadership behavior was perceived by the board and staff. The desire for self-improvement in this area was expressed over and over again.

However, since participation in this project did demand that the superintendent stand in the glare of the spotlight, we cannot reject the possibility that some form of self-selection may have operated in the composition of our sample. Neither can we assume arbitrarily that this self-selection operated systematically in one direction to bias the sample by the inclusion solely of those superintendents who believed that they were basking in the favor of their boards. In more than a single instance,[13] the superintendent already had been asked by his board to submit his resignation. Despite their own equivocal status in their schools at this time, these superintendents agreed to co-operate for the sake of the research itself.

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[13] Obviously, we shall not identify these cases or indicate their exact number.

We have one additional cue that argues against systematic bias in the sample. The comparison of the distribution of superintendents' Leader Behavior Description Questionnaire scores with distributions obtained from other occupational samples reveals no marked constriction of variance on either of the leader behavior dimensions. Despite the fortuity of the sample and our inability to demonstrate its representativeness in a strict statistical sense, we feel justified in assuming that it may be treated, for all practical purposes, as representative of Ohio school superintendents. Whatever bias may have been introduced by self-selection factors does not appear to be systematic. In short, we are dealing with a fortuitous sample that we shall treat as if it were representative.

The names of the fifty superintendents who constitute the sample, and the locations of their schools, are listed alphabetically in Appendix C. The Order of this Listing Does Not Correspond to the Order in Which the Findings are Tabulated Elsewhere in this Report. This arrangement is deliberate--to prevent the identification of the scores of individual superintendents. In the listing of data in the next chapter a code number (from 1 to 50) has been assigned to each participant. He, and he alone, will be informed of his code number. This will permit each man to identify his own scores, in order to compare them with the scores of the group as a whole, but will prevent him (or anybody else) from knowing to whom any other score belongs.

Selection of Respondents

Having chosen this sample of fifty superintendents, the next step was to decide from whom descriptions of their leader behavior should be secured. Earlier experience with the Leader Behavior Description Questionnaire indicated that average scores computed on the basis of five to seven descriptions furnished reasonably stable scores that could be used as indices of the leader's behavior. Inasmuch as all the superintendents except two[14] had five-man boards, we sought to obtain descriptions of each superintendent from his five board members. We recognized at the outset, however, that absences would occur, and hence agreed that when a board member was absent, a description provided by the clerk of the board would be accepted. Although we strove to get responses from five members, we decided to retain any subject for whom a minimum of three sets of responses were secured. The distribution of the number of board members who described the fifty superintendents is given in the following table.

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[14] Both of these were seven-man boards.

Number of Board Member Respondents	Number of Superintendents Described
7	1
6	1
5	36
4	8
3	4

Thus, each of eight superintendents was described by four members of his board, while 38 were described by five or more members of their boards. An average of 4.8 descriptions was secured for each superintendent. In describing the behavior of the fifty superintendents, 237 board members answered the Leader Behavior Description Questionnaire-Real. The same 237 members also answered the Leader Behavior Description Questionnaire-Ideal, indicating how they believed an ideal superintendent should behave.

The procedure used to select respondents from the superintendent's staff was somewhat more complex than that employed with the board. We planned to collect a set of seven staff-member descriptions for each of the fifty superintendents. Two tasks confronted us. The first was to devise a plan whereby no superintendent would be subjected to the possible temptation of "stacking the deck" in his own favor. The second was to augment the safeguards that we had incorporated into our plan for protecting the anonymity of each individual respondent. We believe that we achieved both objectives by the use of the method we shall now describe.

Along with the original letter that solicited co-operation in the study, we sent an Appointment Sheet (Appendix D) on which we asked each participant to indicate a choice of time and dates suitable for our meeting with the staff and the board and to list the names of all members of the staff directly responsible to him.

> Please list the names of ALL the members of your staff who are directly responsible to you and who are in a position to describe your leader behavior. In some situations, these will be the members of a central office staff; in other cases, principals and supervisors; in still others, members of the teaching staff itself. You may include the names of such individuals as your secretary, the custodian, or any non-instructional personnel who report directly to you. Whenever possible, please record a minimum of nine names.

In most cases more than nine members were listed. A typical response was to submit a copy of the school directory or a mimeographed personnel roster. We then used a table of random numbers to select nine names from each list which were returned to the superintendent with the request that these staff members be scheduled to meet with a member of the research team.

Later, when we met with these nine persons, we explained how they had been selected. When absences occurred, the superintendent ordinarily arranged to supply a substitute. The examiner carefully explained that no individual descriptions would be reported--that only the average scores computed from the staff member questionnaires would be used. He then emphasized the additional point that the superintendent would not be able to attribute the staff members' descriptions of his own leader behavior, even in terms of average scores, to all of the nine members present, because, in order to protect further the anonymity of these respondents, we would discard two questionnaires chosen at random from each group of nine, and would calculate our index of the superintendent's behavior from the remaining seven cases. Again, the two questionnaires to be rejected were identified in each instance by the use of a table of random numbers. Accordingly, the choice of the seven describers of each superintendent's behavior involved randomization at two points: first, in selecting nine respondents from the total list submitted by the superintendent; and second, in eliminating the questionnaires of two of these nine respondents. We believe that this procedure minimized bias in the selection of the staff-respondent samples.

The staff description of the leader behavior of each of the fifty respondents was therefore based upon questionnaires answered by seven staff members. For the total sample of administrators, 350 staff members completed the Leader Behavior Description Questionnaire-Real. The same 350 members also answered the Leader Behavior Description Questionnaire-Ideal, on which they indicated their conceptions of an ideal superintendent's behavior.

In addition to securing descriptions of the superintendent's leader behavior from his board and his staff, we asked each of the fifty superintendents to describe his own behavior on the Leader Behavior Description Questionnaire-Real. The superintendents also answered the Leader Behavior Description Questionnaire-Ideal, indicating how they believed they, ideally, should behave as leaders.

The Testing Procedure

The tests were administered in each community by one of the four members who composed the research team.[15] The method of questionnaire administration was standardized for all four examiners. The meetings with the staff and the board were held separately, but not necessarily on the same day. For this reason it was not always possible to schedule the same team member for the meetings with both groups in a given community.

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[15] Carole E. Bare, Mental Hygiene Clinic, Veterans Administration, Washington D. C.; Roald F. Campbell, Department of Education, The Ohio State University; John O. Niederhauser, Assistant Superintendent of Schools, Canton Public Schools, Canton, Ohio; and the writer.

In most communities the meeting with the nine staff members was held immediately after school.[16] Before joining the faculty members, the examiner conferred briefly with the superintendent in order to answer any questions that he might have about the study. The superintendent then introduced the examiner to the faculty group and customarily said a few words about the purpose of the meeting. At this point the examiner described the general design of the study and stressed the fact that scores computed from any descriptions of the superintendent other than that provided by the superintendent's own self-description would not be reported in a form in which the individual respondent could be identified. Furthermore, the superintendent was assured that when the results were reported, he, and he alone, would be informed in a personal communication from the present writer what code number had been assigned to his own scores. The examiner also explained that all the data would be processed at the Personnel Research Board Laboratories, The Ohio State University, and that the identification of the scores of each superintendent would be treated in strict confidence and would not be made available to any member of either the School-Community Development Study or the Department of Education. It was made clear that discussion of his own scores with either his board or staff would occur solely at the discretion of the superintendent himself. The research team's interest was in the relationship among the scores for the sample as a whole, not in the scores of a particular superintendent. We disavowed any intention of using the findings for evaluation purposes.

The LBDQ-Real and the LBDQ-Ideal were both administered at the same sitting. The superintendent worked on these questionnaires simultaneously with the members of his staff. Ordinarily he did this in his own office, but in several instances it was expedient to have him sit in the same room with the staff. Answers to the questionnaires were recorded on IBM answer sheets. The staff members (and the board members) were requested not to record their names on the answer sheets. This precaution afforded further protection of respondent anonymity. The examiner keyed each Real and Ideal answer sheet with a number from 1 to 9, solely to pair the Real and Ideal sheets turned in by each respondent. No record whatsoever was made of which sheets were answered by any given staff (or board) member.

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[16] In a few instances it was possible to schedule this meeting during the school day.

In order to obviate possible bias in the scores introduced by the sequence in which the respondents answered the Real and the Ideal forms of the questionnaire, this sequence was balanced. Approximately half of the respondents answered the Real first and the Ideal second; the other half answered the forms in reverse order. This balancing of order was applied to the staff and the board members and to the superintendents themselves. The device for determining the sequence was simple. We assumed that the dates of the month on which we would administer questionnaires would have equal probability of being either odd-numbered or even-numbered. On odd-numbered dates, we gave the superintendent the Real first and the Ideal second; or even-numbered dates, the Ideal first and the Real second. With nine staff members, the closest split was five and four. On odd-numbered days five members of the staff were given the Real first; and four, the Ideal. On even-numbered days, four members were given the Real first; and five, the Ideal. A similar procedure, with a three-two split, was used with the board members.

The testing session with the superintendent and his staff was usually completed in from one hour to an hour and a half. Although the instructions and requirements for the board members were the same as those for the staff, the board sessions ordinarily ran from 15 to 30 minutes longer than the staff sessions. It was our impression that there was greater variation in the time required for the completion of the two questionnaires among boards than among staffs.

Absences were more frequent at the board sessions than at the staff sessions. In a few instances, in order to be able to retain the subject in our sample, we left questionnaires for absent board members, together with stamped envelopes addressed to the present writer. For the most part, these questionnaires were mailed back promptly and were found to have been filled out carefully.

The field work entailed at least one, and often two, trips to each of the fifty Ohio communities whose school superintendents composed the sample. The first staff meeting was held on April 12, 1954; the last meeting with a board, on October 12, 1954. Most of the data were collected by the close of school in June, but the data for two of the boards were not secured until October. Consequently, the statistical analysis of the data was held up until the returns from the last board were obtained on October 12.

Co-operation was excellent. The superintendents were most helpful in scheduling meetings, and endorsed the purpose of the study. The staff members, for the most part, took a lively interest in the questionnaire, and were conscientious in their approach to the task. The boards were co-operative but varied more than the staffs in their attitude toward the study. In one community, for example, when the examiner arrived to meet with the board he discovered from the superintendent that the board had not yet decided whether they would participate. The examiner described the study to the board members and then waited while they discussed the pros and cons of participation before they voted to take the questionnaire. In another community, as we have noted previously, the board agreed to participate only under the condition that no information about their description of the superintendent would be made available either to him or to any member of the staff or community. In this case the superintendent had been asked to resign, and considerable friction had developed between him and the board. Although data from the superintendent and the staff had already been collected, this subject had to be discarded from the sample. On the other hand, one board called a special late afternoon meeting immediately after our session with the staff in order to save the examiner the bother of either an extra trip to the community or a four-hour wait between testing sessions. One board, whose members were most amiable and appeared unabashedly enthusiastic about their superintendent, puzzled the examiner by their concern over the possibility that our report on this study might identify their description of him until one member finally explained with a grin: "We don't want other communities to know how good he is. They'd try to take him away, and if they made an offer, we might not be able to match it!"

One point about the communications with the superintendent and the conditions of testing should be emphasized. No reference whatsoever was made to the Initiating Structure and Consideration dimensions of leader behavior. In short, although we clearly stated that we were seeking data on the behavior of the superintendent as a leader, we did not indicate what specific aspects of this behavior we sought to measure. Questions on this point were politely but noncommittally parried.

Scoring of the Questionnaires

The raw data consisted of the responses on 1,274 questionnaires, divided as shown in Table III.

Each questionnaire (Real and Ideal) contains 80 items, of which only 30 are scored. The 15 items scored on each of the two dimensions are listed on pages 7 and 8. For positively scored and negatively scored items, the scores assigned to each of the five possible responses are given in Table IV.

With 15 items per dimension and a maximum score of four on each item, the maximum dimension score obtainable is 60. Conversely, the minimum is 0.

Table III

Number of Respondents to Leader Behavior Description Questionnaires, by Source

	LBDQ-Real	LBDQ-Ideal
Superintendents	50	50
Staff members	350	350
Board members	237	237
Total	637	637

Table IV

Scoring of LBDQ Responses

Response	Positively Scored	Negatively Scored
Always	4	0
Often	3	1
Occasionally	2	2
Seldom	1	3
Never	0	4

The LBDQ can be either (a) hand-scored with a scoring stencil, (b) machine-scored with an IBM Scoring Machine, or (c) machine-scored by the use of IBM punched cards. We chose the last of these three methods because of the large number of questionnaires involved and because the preservation of information on all the items in the questionnaire would facilitate subsequent research on the 50 items not contained in the two dimension keys with which we shall deal in our present inquiry. Accordingly, all 50 responses to each of the 1,274 questionnaires were punched into cards which were identified by respondent source and number, questionnaire form, and school system. The punching of all cards was independently verified.

PROCEDURE

The Initiating Structure and the Consideration scores for each respondent on both the Real and the Ideal were computed from the punched data and machine-tabulated. His own scores on the "Real" and "Ideal" were assigned to each superintendent. On each dimension, the score used for the staff members' descriptions of the superintendent is the average (mean) of the scores by which the seven staff respondents describe him. Similarly, a mean score is used for the board members' descriptions of the superintendent on each dimension. These mean scores, by staff and by board, will be referred to as ascribed Real scores that we ascribe to the superintendent as an index of his leader behavior as perceived by his staff and by his board. For the LBDQ-Real, the superintendents' own scores (one on Initiating Structure and one on Consideration for each of the fifty superintendents), the ascribed Real scores by the staff (one on each dimension for each superintendent), and the ascribed Real scores by the board (one on each dimension for each superintendent) constitute the basic derived data (300 scores) upon which all further analyses are based. These three sets of scores will be designated as:

a. LBDQ-Real, Self (50 on Initiating Structure, 50 on Consideration)
b. LBDQ-Real, Staff (50 on Initiating Structure, 50 on Consideration)
c. LBDQ-Real, Board (50 on Initiating Structure, 50 on Consideration)

Similarly we shall have 300 scores based upon the LBDQ-Ideal, classified as follows:

a. LBDQ-Ideal, Self (50 on Initiating Structure, 50 on Consideration)
b. LBDQ-Ideal, Staff (50 on Initiating Structure, 50 on Consideration)
c. LBDQ-Ideal, Board (50 on Initiating Structure, 50 on Consideration)

The data analyses and findings reported in Chapter III are based upon these 600 scores.

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CHAPTER III

FINDINGS

In presenting the findings of this study of fifty superintendents, we shall be guided by three closely related purposes. First, we shall describe the results in terms of the particular superintendents who participated in this project. The knowledge these yield should be of immediate, practical value to the superintendents concerned, and may suggest to them ways in which they can profitably modify their leadership behavior. Second, we shall analyze the relationship among the various scores for the sample as a whole, in an effort to generalize beyond the confines of the present sample. The question here, of course, is: What are the implications, both theoretical and practical, of these findings for educational administration? Third, we shall be concerned about research methodology. We shall report the data in sufficient detail to permit other investigators to replicate the study, note limitations in the procedures that have been used, and suggest how future investigators can improve upon our present methods. Obviously, the details of statistical procedure will be of greater interest to research workers than to practitioners. Since these three strands of purpose cannot be readily separated, we shall not enforce an arbitrary division. Those readers inclined to skip some of the statistical details will be reminded of the story of the third-grader who, when asked to give an oral book report on a story about penguins, declared with forthright charm, "This story tells more about penguins than I care to know."

We are concerned, then, with description, inference, and methodology. At this juncture, further comment about the use of the data as descriptive statistics is in order. We shall describe the findings on these fifty superintendents in such fashion that each of the participant superintendents will be able to compare his own scores with the scores of the other members of the sample. Each superintendent may then determine his relative standing in the sample on Initiating Structure behavior and on Consideration, and may note, for example, whether his staff and his board agree in their perception of his behavior on each of these dimensions. He also may be interested in the extent to which his staff members agree in their perception of his behavior on either or both of these dimensions. Similar questions may be raised about the staff's, board's, and superintendent's own conceptions of how an ideal superintendent should behave. In short, the immediate purpose is to provide the participants in the study with feedback, in the hope that knowledge of this kind about how their staff and board members perceive their leadership behavior as superintendents may have immediate practical implications for the improvement of their leadership behavior.

Our inquiry pertains to the relationship between the perceptions of the superintendent's leader behavior reported by his staff, his board, and himself. But before we examine the mean scores for separate schools which provide an index to the behavior of the superintendent as perceived by his staff and by his board, we must first inspect the assumptions implicit in the use of these mean scores as indices. Such inspection will focus our attention, not only upon the average level at which the superintendent's behavior is described, but also upon the extent to which his describers agree with each other in their individual perceptions of his leadership behavior. Variance in the descriptions of the superintendent's behavior occurs among the members of both staff and board but does not enter as a factor into the superintendent's description of his own leader behavior simply because here the description is obtained from but one describer--the superintendent himself. The self-description scores therefore can be treated in straightforward fashion. This is not the case with the staff and the board scores. Because they are more complex, we shall deal with them first, examining the variance with which the superintendent's behavior is perceived, as well as the mean level at which his behavior on each leader behavior dimension is described.

We shall present the data according to the following plan. We shall report the findings, and consider their interrelations, first, on the LBDQ-Real, and second, on the LBDQ-Ideal. Finally, we shall examine the relationships between the LBDQ-Real and the LBDQ-Ideal. In each case, we shall consider, in turn, the staff descriptions, the board descriptions, and the self-descriptions.

The LBDQ-Real

Let either leader behavior dimension score on the LBDQ for a given respondent be designated as X. For the staff descriptions, we then computed, for each dimension, the mean ascribed score ($\bar{X}$) for each of the fifty superintendents, and the variance (s^2)[17] of this mean score. These are, of course, the means and variances of the fifty subgroups of scores. A similar procedure was followed with

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[17] $$s^2 = \frac{\Sigma X^2 - \frac{(\Sigma X)^2}{n}}{n - 1},$$ in which X represents the raw scores, and n the number of cases. The positive square root of this quantity, i.e., s, is the sample standard deviation.

Table V

Leader Behavior Description Questionnaire-Real, Mean Ascribed Scores, Range, and Subgroup Variances,* by Staff and Board; and Self-Description Scores by Superintendents. (N = 50)

	Staff†				Board‡				Self-Descriptions§	
	Consideration		Initiating Structure		Consideration		Initiating Structure		Consid-eration	Initiating Structure
Supts. Number	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	X	X
1	47	43	40	57	43	138	44	60	44	38
2	41	124	39	32	34	135	45	79	41	38
3	45	65	40	28	48	4	49	12	45	45
4	43	43	36	60	50	21	48	17	47	41
5	33	113	42	61	42	111	49	38	35	39
6	46	21	40	28	49	26	46	41	44	39
7	50	32	37	25	50	19	49	9	53	30
8	50	47	40	34	44	20	41	158	56	43
9	46	70	41	49	39	26	39	48	55	32
10	46	95	39	61	53	24	49	15	35	36
11	32	223	41	74	32	94	41	22	42	47
12	37	154	32	108	45	87	46	117	52	46
13	46	50	34	41	42	27	34	124	48	38
14	39	117	34	15	23	26	29	13	46	38
15	52	26	41	62	45	42	44	24	46	37
16	46	46	14	267	38	107	36	62	43	47
17	40	158	41	39	52	24	48	31	44	37
18	48	68	40	96	52	19	51	11	42	33
19	42	43	39	42	33	35	35	30	44	44
20	47	5	42	23	49	23	42	66	49	40
21	50	28	46	25	29	171	51	22	49	44
22	45	135	31	58	48	25	48	38	45	35

the board descriptions. In Table V are presented the ascribed scores ($\overline{X}$) and variances (s^2) by staff and by board, along with the self-description scores (X) by the superintendents themselves. For the purpose of presentation, these mean scores and their variances have been rounded to whole numbers.[18] At the base of the table are given the means (M) of the $\overline{X}$ columns $\left(\frac{\Sigma X}{50}\right)$ and their respective standard deviations (s); and in the case of the self-descriptions, the mean of the 50 X's ($\overline{X}$), and the standard deviation of each of these two distributions.

We note by inspection of the $\overline{X}$ and X columns in Table V that the range of scores on both dimensions and from all three sources, i.e., staff, board, and self, is approximately the same and is broad enough to permit differentiation. It will be recalled that the theoretical range of scores on each dimension is from 0 to 60. The obtained range thus falls in the upper 60 per cent of the theoretical range.

Before we comment on the six means and their respective standard deviations, it is important to inspect the four s^2 columns. In each of these columns the salient feature to be noted is the range in the variance with which subgroup respondents describe their respective superintendents. For example, in the second column (s^2 for Consideration, staff) we find a variance range from 5 to 352. In the first instance, that of Superintendent No. 20, the mean ascribed score of 47 is derived from seven respondents whose scores in describing him range from 44 to 50. In the second case, that of Superintendent No. 26, the mean score of 38 is obtained from scores that range between 16 and 51. The staff members of Superintendent No. 20 are in essential agreement about how much Consideration he shows; those of Superintendent No. 26 are in essential disagreement. One of the respondents who described No. 26 perceived him (Score 51) as more considerate than did any of the seven respondents who described No. 20. On the other hand, one of No. 26's describers perceived him as falling distinctly at the lower end (Score 16) of the Consideration dimension. To be sure, these two instances represent extreme cases that have been chosen deliberately for illustration. Our principal concern is not to compare any two superintendents but to determine whether the assumption of homogeneity of within-group variance is satisfied for the scores by which the subgroup respondents describe the total sample of fifty superintendents. If the assumption of variance homogeneity is not tenable, this has to be taken into account in interpreting the obtained F ratios for the between- vs. within-group

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[18] In applying Barlett's test, and in computing F ratios, the unrounded figures, corrected to two decimal places, have been used.

Table V (Continued from page 40)

	Staff				Board				Self-Descriptions	
	Consideration		Initiating Structure		Consideration		Initiating Structure		Consid-eration	Initiating Structure
Supts. Number	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	X	X
49	36	53	40	25	38	99	43	47	45	42
50	46	20	35	28	52	1	54	44	44	31
Mean	43.5		38.0		44.8		44.5		45.4	38.2
s	5.7		4.5		7.3		5.8		5.8	5.6
Range	23-52		28-48		23-56		29-54		30-56	23-47

* $\bar{X}$ scores and variances rounded to integers.

† The correlation between the two dimension scores is .18, which does not differ significantly from zero.

‡ The correlation between the two dimension scores is .61, which is significantly at the .01 level of confidence.

§ The correlation between the two dimension scores is .23, which does not differ significantly from zero.

Table V (continued from page 39)

	Staff				Board				Self-Descriptions	
	Consideration		Initiating Structure		Consideration		Initiating Structure		Consid-eration	Initiating Structure
Supts. Number	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	X	X
23	46	53	32	31	44	87	44	51	46	33
24	23	194	32	78	37	175	45	67	48	37
25	47	90	40	108	43	92	37	125	53	45
26	38	352	28	47	45	34	45	57	41	33
27	49	7	44	42	56	9	50	37	53	39
28	47	87	42	34	38	51	47	25	45	45
29	47	68	37	71	54	22	51	29	49	30
30	32	132	38	57	45	128	49	70	45	45
31	52	20	42	48	48	111	37	44	43	35
32	45	85	28	231	38	144	34	216	51	27
33	43	107	31	58	53	9	51	8	50	36
34	45	46	30	79	53	9	47	20	51	42
35	46	72	42	61	50	28	44	46	45	45
36	43	54	41	30	37	112	47	32	30	44
37	37	111	39	62	45	5	48	37	49	42
38	39	84	33	10	47	18	40	6	54	36
39	48	18	35	16	51	0	46	121	41	35
40	45	30	35	58	47	61	45	99	47	43
41	42	107	37	51	42	58	51	26	38	28
42	44	55	37	54	34	58	30	109	30	23
43	42	140	48	46	47	5	43	19	45	43
44	50	32	39	35	53	2	47	19	42	37
45	44	22	39	25	53	5	52	50	47	36
46	41	26	36	57	40	171	40	46	51	43
47	48	28	41	51	48	78	47	170	47	35
48	38	343	42	27	54	14	49	20	35	33

analysis of variance. We therefore applied Barlett's test (2) to each of the four sets of s^2 in Table V. The "corrected" χ^2 values are given in Table VI.

Table VI

χ^2 Values for Barlett's Test of Homogeneity of Variance for Staff, and Board, LBDQ-Real Scores (df = 49)

s^2	χ^2
Consideration, staff	96.53*
Initiating Structure, staff	56.77
Consideration, board[1]	90.31*
Initiating Structure, board	55.96

[1] The number of board member respondents ranged from 3 to 7 (cf. page 29). Hence Barlett's test for r groups with unequal n's was used.

*Significant at the .01 level of confidence. P values for df 49 are not given in the standard χ^2 Table. Using the formula $\sqrt{2\chi^2} = \sqrt{2n - 1} + t$, the χ^2 value for $p_{.05}$ is computed as 63.44; for $p_{.01}$ as 71.39.

We find that on Consideration, for both staff and board taken separately, the variance with which the respondent groups describe their respective superintendents differs significantly between groups.[19] But with the Initiating Structure scores, the assumption of homogeneity of variance is tenable. In short, from group to group, the agreement among group members in describing their superintendents on Initiating Structure is essentially the same, but in the case of Consideration the extent to which members agree fluctuates significantly from superintendent to superintendent.

The presence of significant differences between within-group variances poses the question of whether these differences are purely random or are, perhaps, systematic. Inspection of the distributions suggested that the magnitude of the means and of the variances might be associated systematically with each other. Accordingly, for each of the first four pairs of columns in Table V, product-moment correlations were computed. These are given in Table VII.

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[19] Because this heterogeneity of within-group variance indicated that the variable probably was non-normally distributed, a square-root transformation of the X scores was made to determine whether it would reduce appreciably the heterogeneity of within-group variance. The results were negative, for the corrected χ^2 values of the transformed scores also were found to be significant at the .01 level. Inspection of the data suggested that other orthodox transformations probably would be equally ineffective in diminishing significantly the heterogeneity of variance.

Table VII

Product-Moment Correlations between Means and Variances of LBDQ-Real Scores, Staff, and Board

Consideration, staff	**-.63***
Consideration, board	**-.59***
Initiating Structure, staff	**-.12**
Initiating Structure, board	**-.38***

***Significant at the .01 level of confidence.**

The variances tend to be correlated negatively with the magnitude of the means, and in three instances out of four, these correlations are significant at the .01 level. It will be noted that this systematic relationship is more pronounced for the Consideration dimension than for the Initiating Structure dimension. In the case of the Consideration-Staff scores, for example, the correlation of -.63 indicates that those superintendents who are described as high on Consideration are described by staff respondents with less variance than those who are perceived as low on Consideration. To some extent this relationship is unquestionably an artifact produced by inadequate "ceiling" for the dimension scores, as measured by the present LBDQ instrument. Thus, as scores tend toward the maximum value on the scale, i.e., 60, they are crowded against an arbitrary barrier ("ceiling"), and their variance is consequently reduced. Theoretically at least, if the scale were extended upward to measure a degree of Consideration that would qualify the superintendent to wear a burnished halo, we could provide latitude for variance at the upper end of the scale comparable to that now found in the middle and lower segments. But a scale extension of this kind is not practical, particularly in view of the fact that there is reason to suspect that the respondents would concomitantly shift their point of reference upward, and hence would continue to produce some distortion in the variance at the upper end of the scale. Although the distributions are negatively skew, there is insufficient evidence to attribute the negative correlations between the means and variances exclusively to whatever artifact is introduced by inadequate "ceiling" for the scale. In other words, the correlation may reflect a "real" association. Perhaps superintendents whose behavior is characterized by high Consideration do tend to stimulate among staff associates less variance in the way their behavior is perceived. This may mean that the more considerate leader is more consistent in his behavior on this dimension, and for this reason his behavior is perceived with less variance. Conversely, the man who tends to score low on Consideration may "in fact" show less consistency in his Consideration, either (or both) in dealing with the same associate at different times or with different associates at any given time. Unfortunately, two limitations of the present form of the LBDQ prevent a clear-cut answer to this question. The first is the matter of "ceiling" mentioned previously. The second limitation arises from the fact that the individual items are answered in terms of the frequency with which the leader is perceived to engage in the behavior specified. Thus behavior perceived as being highly consistent automatically contributes to high Consideration scores. Despite these limitations in the instrument, the obtained correlations suggest the desirability of testing the proposed hypothesis in subsequent research in which these restrictions are overcome, or at least minimized. It seems reasonable to suppose that one important component of good human relations skills (i.e., Consideration) is a fundamental consistency in attitude toward others in interpersonal relations.

The same point about "ceiling" effect that has been developed for the example of the Consideration-Staff scores applies to some extent to the three other sets of scores in Table VII. One notes, however, that in the case of the Initiating Structure-Staff scores the correlation between the means and variances does not differ significantly from zero. In other words, there is only a chance relationship between how much structure the superintendent is perceived as initiating and how greatly the individual staff respondents differ among themselves in their perception of this aspect of the superintendent's leadership behavior.

The significant difference between within-group variances for the Consideration dimension, and the significant correlations between these variances and their respective means, complicate, in two ways, our efforts to analyze the data. First, the heterogeneity of within-group variance, violating as it does a fundamental assumption required by the analysis of variance technique, forces us to examine with greater care whatever estimates we derive for the between- vs. the within-group F ratios. The same caution must apply to our estimates of the extent of agreement among all describers. Second, in determining the relationships between different sets of means scores, we not only are confronted with the fact that the correlations computed from these scores tend to overestimate the relationship simply because these scores are the means of subgroups (11, p. 431) but must contend with the further condition that the variances of the subgroup scores are correlated significantly with the mean scores.

Let us deal, in turn, with each of these two complications. First, let us examine the implications of the variance heterogeneity for our one-way classification analysis of variance. The crux of the issue is to what extent, and under what conditions, a significant heterogeneity of variance will affect our estimate and evaluation of the F ratio. Fortunately, this question has been investigated. Cochran (7, p. 24), in summarizing the results of pertinent investigations, concludes that no serious error is introduced by non-normality on the significance levels of the F test. But the tabular probability is an underestimate. By using the ordinary F table, we tend to err in announcing too many significant results. Quensel (29), in a paper dated the same year as that in which Cochran's article appeared, concludes that despite variance heterogeneity, the F ratio is not greatly affected provided that the subgroup sizes are equal. Box (3), in a recent paper, demonstrates a confirmation of Quensel's conclusion: if the groups are equal in size, moderate inequality of variance does not seriously affect the test. But when the group n's are unequal, Box shows that much larger discrepancies occur in estimating the F ratio.

Accordingly, in the case of the scores secured from staff members where n = 7 for each of the fifty superintendents, there is insufficient reason to suppose that the variance heterogeneity will produce a serious error in our estimation of the F ratios. With the scores from board members, however, where n's range from three to seven, our F ratios will have to be recognized as probable overestimations. Even with the boards, however, it will be noted from page 29 that 44 of the 50 cases do not differ by an n of more than one.

We may illustrate our procedure for testing between-group differences and estimating the amount of agreement among respondents by inspecting the analysis of variance data for Consideration-Staff presented in Table VIII. The F ratio given in Table VIII is so clearly significant that it is doubtful whether the heterogeneity of variance, apart from the difference between the means, could account for its magnitude with these degrees of freedom. Even an ultra-conservative correction for overestimation would not alter the judgment that the ratio is significant beyond the .01

Table VIII

Analysis of Variance of LBDQ Scores, Consideration-Staff

Source of Variation	Sum of Squares	df	Estimated Variance	F
Between groups	11202.62	49	228.62	2.760*
Within groups	24850.84	300	82.84	
Total	36053.46	349		

*Significant at the .001 level of confidence.

level. From this circumstance we conclude that the fifty superintendents differ significantly in consideration in the descriptions given of them by their respective staff members.

From these same data we may also estimate the amount of agreement among describers as reflected by the unbiased correlation ratio. For these Consideration-Staff scores, this ratio, designated as epsilon (ϵ) by Kelley (25), is .44. The staff members tend to agree in their descriptions of the Consideration of the respective superintendents.[20]

In Table IX are given the F ratios and the corresponding ϵ values for the LBDQ-Real scores, staff and board. The four F ratios are significant at the .001 level, and even with exaggerated allowance for overestimation as the result of within-groups variance heterogeneity, we cannot avoid the conclusion that the differences between the group means are statistically significant, and that the describers within groups, whether staff or board, tend to agree among themselves in their estimates of their respective superintendents. The F ratios indicate that the group mean scores (the $\bar{X}$ scores in Table V) discriminate differences between the fifty superintendents with sufficient reliability to justify our use of these $\bar{X}$ scores as indices of how the superintendent's behavior is perceived by his staff and board respectively.

So much for the first of the two complications referred to on pages 44-45. Now we are ready to examine the second:

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[20] The significance of ϵ is the same as that of the corresponding "between- vs. within-groups" F ratio.

Table IX

Between- vs. Within-Groups F Ratios, and Unbiased Correlation Ratios (ϵ) for LBDQ-Real Scores: Staff and Board

	F‡	ϵ
Consideration, staff*	2.760	.44
Consideration, board†	4.156	.63
Initiating Structure, staff	2.697	.44
Initiating Structure, board	2.775	.52

*For staff, df = 49 and 300.

†For board, df = 49 and 187.

‡All four F ratios are significant at the .001 level.

the bearing of the variance heterogeneity upon the estimation of the correlation between $\bar{X}_{Staff}$, X_{Board}, and X_{Self} scores. This, of course, brings us to the question that provided the impetus for the present inquiry: What is the relationship between the perceptions of the superintendent's leadership behavior as described by the staff, the board, and the superintendent himself? We are now ready to direct our attention again to the data in Table V. Let us note the two principal points we have developed since this table was presented initially.

1. Within the columns, the $\bar{X}$ scores differ significantly from each other, and hence these scores discriminate among superintendents. As a corollary of this, we have noted that within groups, but separately for sources, i.e., staff or board, the respondents tend to agree significantly in the description of their respective superintendents.

2. For Consideration, the variances of scores within groups differ significantly across the fifty groups, taken separately by source. Furthermore, for both Consideration and Initiating Structure these differences tend to be associated systematically with the corresponding $\bar{X}$ scores. Significant negative correlations are found between the magnitude of the $\bar{X}$ scores and the size of the respective s^2 measures.

Our immediate purpose is to estimate, for each dimension, the relationship between the $\bar{X}_{Staff}$, the $\bar{X}_{Board}$, and the X_{Self} scores. The X_{Self} scores do not entail the complication of s^2 values that differ from superintendent to superintendent because only the superintendent's own score is involved, and hence $s^2 = 0$ in every case. Let us, therefore, for the moment disregard the X_{Self} scores and focus our attention upon the $\bar{X}_{Staff}$ and $\bar{X}_{Board}$ scores.

These $\bar{X}$ scores are the average scores computed for fifty different groups of respondents. As we have noted earlier, when the average scores of a number of different groups are correlated against the average scores for a paired set of groups, a spurious correlation usually results. Correlations between averages are "inflated" because a large number of factors that ordinarily reduce the correlation for the total sample of scores cancel out when the averages of subgroups are correlated. One such confounding factor is the heterogeneity of within-group variance. Consequently, in estimating the correlation between $\bar{X}$ scores it is desirable to remove the effect of differences in the s^2 values, especially since these s^2 values are correlated significantly with the scores in the corresponding X arrays. This estimation can be accomplished by the use of second-order partial correlations. Thus, if we denote $\bar{X}_{Staff}$ as Variable 1 and $\bar{X}_{Board}$ as Variable 2, and their respective s^2 values as Variables 3 and 4, then we may compute $r_{12.34}$ which estimates the relationship between the two $\bar{X}$ columns with the effect of the two s^2 columns partialled out.[21]

For example, in the case of the Consideration-Staff vs. Consideration-Board relationship, the necessary zero order correlations to be taken into account are as follows:

$r_{12} = .33$
$r_{13} = -.63$
$r_{14} = -.32$
$r_{23} = -.08$
$r_{24} = -.59$
$r_{34} = .04$

From these zero-order correlations the second-order correlation $r_{12.34}$ is computed as .18. Thus, if we consider the $\bar{X}$ arrays alone, $r_{12} = .33$, which is significant at the .05 level. But when we partial out the effect of the subgroup variances, this estimate is reduced to $r_{12.34} = .18$, which figure fails of significance.

In passing, we may note that the correlation between the two sets of s^2 (i.e., $r_{34} = .04$) indicates that there is only a chance relationship between the variance with which the staff members perceive the superintendent and the variance with which the board members perceive him on the Consideration dimension. In other words, the superintendent, as a stimulus agent, does not provoke in both groups a similar degree of variance in the members' perception of his behavior.

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[21] The s^2 values are treated here as scores.

The second order correlation $r_{12.34}$ "corrects" for the overestimation of r_{12} produced by the use of group mean scores. But both r_{12} and $r_{12.34}$ are based upon scores secured from an instrument with less than perfect reliability. The lack of reliability increases the variability in the scores and hence tends to "deflate" the obtained measure of relationship between two arrays of these scores. We may allow for this underestimation of relationship by applying to the obtained correlation a correction for attenuation.[22]

In the present instance we shall use split-half reliability coefficients in the denominator of the correction formula: .92 for Consideration and .83 for Initiating Structure. Applying this correction to $r_{12.34} = .18$ for the Consideration scores, we obtain $r_{12.34}$ ("corrected") = .20, which with 46 df fails of significance at the .05 level. We therefore conclude that according to our best estimate (and for an instrument with theoretically perfect reliability) there is only a chance relationship between the staff and board perceptions of how much Consideration the superintendent shows in his behavior as a leader. In short, the staff members agree among themselves on how considerate the superintendent is, and the board members also agree among themselves on how considerate he is, but the two groups do not agree with each other. Knowing how much Consideration the staff perceives that the superintendent shows, we can predict with no greater than chance accuracy how the board will describe the superintendent in the matter of Consideration. And vice versa. This may mean that the superintendent actually behaves quite differently in this respect in dealing with his staff and with his board; or on the other hand, it may mean that one or both sets of describers do not possess sufficient information about the superintendent's behavior to know how he does behave on the Consideration dimension.

The same procedure of double corrections of the estimated relationship--by the use of partial correlations to correct for overestimation, and of the attenuation correction for underestimation--has been used with the other sets of relationships computed from the data in Table V. The results are summarized in Table X.

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[22] Cf. Garrett (11, p. 396).

Table X

Product-Moment Correlations between Staff, Board, and Self Descriptions of Superintendents on the LBDQ-Real (N =50)

		r_{12}[*]	$r_{12.34}$[†] or $r_{12.3}$	$r_{12.34}$ or $r_{12.3}$, Corrected for Attenuation
Consideration	Staff vs. board	.33[‡]	.18	.20
	Staff vs. self	.16	.00	.00
	Board vs. self	.11	.12	.13
Initiating Structure	Staff vs. board	.09	.00	.00
	Staff vs. self	.36[§]	.37[§]	.44[§]
	Board vs. self	-.02	-.07	-.08

[*] Correlation between $\bar{X}$ scores.

[†] Correlation between $\bar{X}$ scores with the effect of s^2 values partialled out. The $r_{12.34}$ applies to the staff vs. board, the $r_{12.3}$ to the two relations that involve the self scores where no subgroup s^2 is involved.

[‡] Significant at the .05 level of confidence.

[§] Significant at the .01 level of confidence.

It will be noted from the figures in the right-hand column of Table X that the staff, board, and self descriptions are, on the whole, not significantly related to each other. The single exception occurs in the correlation between the Staff-Self Initiating Structure scores.

On Consideration, although the staff and board members agree within their own groups in their description of the superintendent, they do not agree with each other. Furthermore, the superintendent's description of his own behavior in this regard agrees with neither the staff nor the board descriptions.

On Initiating Structure the superintendent's descriptions of themselves share a common variance[23] of approximately

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[23] This is estimated by squaring the obtained r, - i.e., $.44^2$.

19 per cent with staff member descriptions of their behavior. Although this relationship is statistically significant, it nonetheless does not represent a high degree of relationship. Again, as with the Consideration scores, the board descriptions agree with neither the description of the staff nor the self-descriptions.

This general lack of relationship between scores from the three sources is portrayed graphically in Figure 3 for Consideration, and in Figure 4 for Initiating Structure. In these two histograms the code numbers of the fifty superintendents have been inserted in the individual cells. Thus in Figure 3, Superintendent No. 1 is perceived as slightly more Considerate by his staff than by his board; and he, in turn, describes his own Consideration at the same level as it is described by his board. But one notes, too, that although Superintendent No. 11 is perceived as equally low in Consideration by both his staff and board, he perceives his own behavior as far more Considerate than it is perceived to be by either group of his associates. In Figure 4, Superintendent No. 50 presents a provocative pattern. His board perceives him as Initiating more Structure than do their respective boards perceive any of the 49 other superintendents in the sample. Yet his staff describes him as below average in this respect, and he himself perceives his Initiating Structure behavior as even lower than it is perceived by his staff. The discrepancy between his self-description on the Initiating Structure dimension and his board's perception of his behavior is especially marked.

The means and standard deviations of these distributions are given at the base of Table V. For each dimension separately, the standard deviations from each of the three sources do not differ significantly from each other.[24] The distributions shown in Figures 1 and 2 are obviously not normal. One notes especially the skewness of the board scores. For testing the differences between the means we are not justified in using the orthodox *t* test, predicated upon the assumption of distribution normality. Accordingly, we have used a non-parametric test devised by Wilcoxon (37).

In Table XI are given the T values (the lower rank total of the same sign), by leader behavior dimension, for each of the three comparisons between sources of description. We conclude from these data that the boards, as compared with the staffs, perceive their fifty superintendents as scoring higher on both Consideration and Initiating

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[24] Because the variances are based upon related scores, the appropriate test is:

$$t = \frac{\left(s_2^2 - s_1^2\right)\sqrt{n-2}}{2\, s_1\, s_2 \sqrt{1 - r_{12}^2}}$$

; cf. Walker and Lev (35, p. 190).

Figure 3

Histogram of LBDQ-Real, Consideration
Scores: Staff, Board, and Superintendent* (N = 50)

Score	Staff	Board	Superintendent
55-56		27	8 9
53-54		10 29 33 34 44 45 48	7 25 27 38
51-52	31 15	17 18 39 50	12 32 34 46
49-50	44 27 21 8 7	4 6 7 20 35	20 21 29 33 37
47-48	47 39 29 28 25 20 18 1	3 22 28 31 38 40 43 47	4 13 24 40 45 47
45-46	50 40 35 34 32 23 22 16 13 10 9 6 3	12 15 26 30 37	3 14 15 22 23 28 30 35 43 49
43-44	45 42 36 33 4	1 8 23 25	1 6 16 17 19 31 50
41-42	46 43 41 19 2	5 13 41	2 11 18 26 39 44
39-40	38 17 14	9 46	
37-38	48 37 26 12	16 24 32 36 49	41
35-36	49		5 10 48
33-34	5	2 19 42	
31-32	30 11	11	
29-30		21	36 42
27-28			
25-26			
23-24	24	14	

*The figures in the histogram cells are the identification numbers of the individual superintendents.

Figure 4

Histogram of LBDQ-Real, Initiating Structure
Scores: Staff, Board, and Superintendent*
(N = 50)

Score	Staff	Board	Superintendent
53-54		50	
51-52		18 21 29 33 41 45	
49-50		3 5 7 10 27 30 48	
47-48	43	4 17 22 28 34 36 37 44 47	11 16
45-46	21	2 6 12 24 26 39 40	3 12 25 28 30 35
43-44	27 16	1 15 23 35 43 49	8 19 21 36 40 43 46
41-42	48 47 36 35 31 28 20 17 15 11 9 5	8 11 20	4 34 37 49
39-40	49 45 44 37 25 19 18 10 8 6 3 2 1	9 38 46	5 6 20 27
37-38	42 41 30 29 7	25 31	1 2 13 14 15 17 24 44
35-36	50 46 40 39 4	16 19	10 22 31 33 38 39 45 47
33-34	38 14 13	13 32	18 23 26 48
31-32	33 24 23 22 12		9 50
29-30	34	14 42	7 29
27-28	32 26		32 41
25-26			
23-24			42

*The figures in the histogram cells are the identification numbers of the individual superintendents.

Table XI

T Values for Non-parametric Test of Difference between Leader Behavior Description Questionnaire-Real Scores of Staff, Board, and Self (N = 50)

	Consideration	Initiating Structure
Staff vs. board*	+408.0†	+101.0‡
Staff vs. self	+375.0†	+632.0
Board vs. self	+536.5	-155.0‡

*A plus sign indicates that the mean score of the second member of the pair is higher; a negative sign that the mean of the second member is lower. The smaller the T value, the more significant is the difference. For N = 50, $T_{.05} \leq 434.5$; $T_{.01} \leq 370.65$; $T_{.001} \leq 341.85$.

†Significant at the .05 level of confidence.

‡Significant at the .001 level of confidence.

Structure. Previous research has indicated that the more effective leaders are those who score high on both dimensions. The boards, therefore, tend to describe their superintendents as effective leaders, but their favorable description differs significantly from the description of these same superintendents by their staffs.

On the Consideration dimension, the superintendents describe themselves as more Considerate than do the staffs. Hence the staffs perceive the superintendents as significantly less Considerate than they are perceived to be by either the boards or the superintendents themselves. On Initiating Structure, the boards score the superintendents higher than the superintendents describe themselves. Thus the boards describe the superintendents as Initiating more Structure than they are perceived as doing by either the staffs or the superintendents themselves.

Recapitulation.--Our findings on the LBDQ-Real may be summarized as follows:

1. For both leader behavior dimensions, the staff respondents show statistically significant agreement in their description of their respective superintendents.
2. For both leader behavior dimensions, the board respondents show statistically significant agreement

in their description of their respective superintendents.

3. Although the staff members tend to agree in the description of their respective superintendent's Consideration, the extent of this agreement fluctuates significantly from superintendent to superintendent.
4. Similarly, although the board members tend to agree in the description of their respective superintendent's Consideration, the extent of this agreement also fluctuates significantly from superintendent to superintendent.
5. There is, however, only a chance relationship between variation in the agreement with which staff members describe the Consideration of their superintendents and variation in the agreement with which the board members describe the Consideration of the same superintendents. In other words, the behavior of the superintendent does not provoke in staff and board groups a similar variance among members in their perception of his Consideration. This lack of relationship in variance reflects differences in the consistency with which the superintendent displays Consideration in dealing with the constituents of each of these two groups. Consistency in the superintendent's role behavior in dealing with the several members of his board may or may not be associated with similar consistency in his behavior toward the members of his staff.
6. From staff to staff, there is essentially the same extent of agreement among group members in describing their superintendents' Initiating Structure behavior.
7. From board to board, there is essentially the same extent of agreement among group members in describing their superintendents' Initiating Structure behavior.
8. Although the staff and the board members agree among themselves as a group in their description of the superintendent's Consideration, they do not agree with each other. Likewise, the staff and the board members agree among themselves as a group in their description of the superintendent's Initiating Structure behavior but do not agree with each other. This suggests that the superintendent adopts different role behavior in dealing with each of these groups.

9. The superintendents' description of their own Consideration behavior does not agree with the way in which they are described by either their staffs or boards. In respect to Consideration, they do not see themselves as the members of these groups see them.

10. The staffs perceive the superintendents as less Considerate than they are described as being by either the boards or the superintendents themselves.

11. For Initiating Structure there is a statistically significant, but low correlation between the superintendents' self-descriptions and staff-member descriptions of their behavior.

12. The boards describe the superintendents as Initiating Structure to a greater extent than they are perceived as doing by either the staffs or the superintendents themselves.

13. For both Initiating Structure and Consideration, the board descriptions show only chance relationship with both the staff and the self descriptions.

14. The boards describe the fifty superintendents as higher on both Consideration and Initiating Structure than they are described by the staffs, and hence show greater inclination than the staffs to view the superintendents as effective leaders. This suggests that the superintendents "play up to the boards"--behave, in fact, more effectively as leaders in dealing with their boards than in working with their own staffs. Even though the superintendent may possess good leadership skills as evidenced in his relationship with his board, he seems inclined to "let down" a little in his behavior with his staff.

The LBDQ-Ideal

The respondent indicates on the LBDQ-Ideal how he believes a superintendent should behave. The pattern of our analysis of these scores will be similar to that used in the preceding section with the LBDQ-Real. The subgroup mean scores (X) and variances by staff and by board, and the self-scores (X) of the superintendents, are presented in Table XII.

The range of scores on both dimensions, and from all three sources, is approximately the same, and relatively

Table XII

*Leader Behavior Description Questionnaire-Ideal Mean Ascribed Scores, Range and Subgroup Variances,** by Staff and Board, and Self-Description Scores by Superintendents. (N = 50)

	Staff†				Board				Self-Descriptions	
	Consideration		Initiating Structure		Consideration		Initiating Structure		Consid-eration	Initiating Structure
Supts. Number	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	X	X
1	50	14	43	17	48	26	42	50	51	44
2	48	63	43	22	53	5	53	6	52	41
3	50	8	46	57	47	4	50	11	48	52
4	50	15	45	60	51	42	49	42	54	47
5	43	8	47	37	48	15	52	26	58	48
6	50	19	47	10	52	22	53	10	55	48
7	52	18	47	28	52	30	52	7	51	43
8	47	40	45	45	46	71	47	129	56	44
9	47	22	43	36	47	12	45	54	57	43
10	49	12	43	76	52	74	51	14	59	44
11	47	46	48	40	49	79	47	24	50	54
12	48	43	46	43	48	65	53	65	48	51
13	49	7	48	19	45	31	48	11	57	47
14	47	15	43	19	48	112	48	72	52	47
15	52	12	44	49	50	25	48	56	58	50
16	49	20	48	12	49	16	51	6	49	52
17	49	13	47	20	55	3	47	32	58	44
18	49	32	41	78	53	12	54	8	52	38
19	47	14	44	44	49	11	51	11	53	54
20	48	14	46	34	48	24	51	54	48	43
21	47	34	49	13	50	12	50	44	55	50
22	49	51	42	68	49	4	50	15	48	45

Table XII (continued from page 57)

	Staff				Board				Self-Descriptions	
	Consideration		Initiating Structure		Consideration		Initiating Structure		Consid-eration	Initiating Structure
Supts. Number	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	X	X
23	47	77	42	73	49	56	48	37	57	44
24	51	12	47	19	52	12	50	28	53	42
25	53	38	55	14	52	23	54	3	55	43
26	44	62	42	66	53	16	50	14	52	42
27	50	5	45	23	56	2	54	29	53	48
28	48	16	43	33	51	37	49	24	54	42
29	48	33	44	32	51	12	50	29	42	39
30	44	39	47	54	49	10	53	18	48	45
31	52	8	43	26	51	34	45	14	57	43
32	49	25	53	21	44	46	46	47	54	42
33	49	20	46	10	52	20	52	4	47	43
34	49	17	41	35	52	13	51	14	57	46
35	50	14	45	30	53	23	49	39	51	51
36	48	7	44	32	48	31	52	22	51	50
37	52	22	45	82	48	12	51	32	49	50
38	49	23	47	10	48	28	55	25	54	44
39	51	15	46	33	53	22	52	72	52	44
40	51	15	48	30	50	16	55	6	55	48
41	43	9	46	58	51	5	49	29	45	36
42	51	6	44	18	47	58	49	9	51	31
43	45	190	47	106	52	39	45	54	53	46
44	49	14	43	32	51	26	48	24	51	49
45	49	24	49	43	50	11	53	14	53	52
46	46	58	46	11	50	3	50	10	54	43
47	52	10	46	12	50	26	51	41	51	41
48	51	4	44	22	55	2	51	25	54	48

Table XII (continued from page 58)

	Staff				Board				Self-Descriptions	
	Consideration		Initiating Structure		Consideration		Initiating Structure		Consid- eration	Initiating Structure
Supts. Number	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	$\bar{X}$	s^2	X	X
49	47	42	45	79	48	17	47	5	49	47
50	46	40	39	49	50	14	55	16	56	44
Mean	48.6		45.3		50.1		50.1		52.5	45.4
s	2.4		2.9		2.5		2.9		3.4	4.4
Range	45-53		39-55		44-56		42-55		42-58	31-54

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* $\bar{X}$ Scores and variances rounded to integers.

† For all three respondent groups the correlations between the two dimensions scores do not differ significantly from zero.

narrow in every case. The means of the $\overline{X}$ and X columns are high (especially as compared with the corresponding LBDQ-Real data in Table V), and their standard deviations are small. Before proceeding with the between- vs. within-group analysis of variance, Bartlett's test was applied to the four sets of s^2. The corrected $\underline{\chi}^2$ values are given in Table XIII.

Table XIII

$\underline{\chi}^2$ Values for Barlett's Test of Homogeneity of Variance for Staff and Board, LBDQ-Ideal Scores (df = 49)

s^2	$\underline{\chi}^2$
Consideration, staff	92.60‡
Initiating Structure, staff	52.85
Consideration, board*	66.26†
Initiating Structure, board	55.47

*Barlett's test for r groups with unequal n's was used.

†Significant at the .05 level.

‡Significant at the .01 level.

We find for both staff and board, taken separately, that the variances in how Considerate the respondent groups believe a superintendent should be differ significantly from school to school.[25] On the other hand, the agreement among group members in indicating how much Structure the superintendent should Initiate is essentially the same from school to school. This pattern, it will be recalled, is the same as was found with the LBDQ-Real.

We next examined the relationship between the means and variances. These correlations are given in Table XIV.

In each instance there is a statistically significant negative correlation between the means and the variances. This same trend was noted in the case of the LBDQ-Real scores. With the Ideal scores, as with the Real, these relationships can be attributed to the artifact introduced by the insufficient "ceiling" of the dimension scales as measured by the present instrument. Because these scores are not distributed normally, the same cautions cited in the section on the LBDQ-Real in regard to the interpretation of the F ratios for the "between- vs. within-groups" analysis of variance apply here. The F ratios and corresponding ϵ values are presented in Table XV.

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[25] There is, however, only a chance correlation (r = .09) between these two sets of variances.

Table XIV

Product-Moment Correlations between Means and Variances of LBDQ-Ideal Scores, Staff and Board (N = 50)

Consideration, staff	-.40†
Consideration, board	-.36†
Initiating Structure, staff	-.35*
Initiating Structure, board	-.38†

*Significant at the .05 level of confidence.

†Significant at the .01 level of confidence.

Table XV

Between- vs. Within-Groups F Ratios, and Unbiased Correlation Ratios (ϵ) for LBDQ-Ideal Scores: Staff and Board

	F	ϵ
Consideration, staff*	1.152	.14
Consideration, board†	1.253	.22
Initiating Structure, staff	1.485‡	.25
Initiating Structure, board	1.397	.28

*For staff, df = 49 and 300.

†For board, df = 49 and 187.

‡Significant at the .05 level.

The results indicate that the groups do not differ from each other in their description of how a superintendent should behave; nor, in corrollary, is there significant within-group agreement. A single exception is noted in the case of the staff Initiating Structure scores. The F ratio is only marginally significant at the .05 level, and therefore, in view of the fact that there is a significant correlation between the means and variances of the component subgroups, its significance must be interpreted with especial caution. It does suggest, however, that the staffs differ from school to school in their beliefs concerning how much Structure a superintendent should initiate.

For the most part, then, since the staff and board conceptions of how an ideal superintendent should behave do not differ from school to school, they constitute what are in effect general norms of how staffs and boards believe a superintendent should behave. Accordingly, the $\bar{X}$ scores do not provide a reliable means of discrimination either between boards or between staffs. These non-significant F ratios indicate that the variation within the respective boards (or within the respective staffs) in the respondent's beliefs of how a superintendent should behave is as great as the variation between the respective boards (or staffs). If, for example, we wish to describe the ideology of a given board concerning a superintendent's behavior with respect to Consideration, the mean score of all board members, irrespective of school, affords an index that does not differ significantly from the mean score for the members of any particular board. Under these circumstances the correlations between either Board-Ideal or Staff-Ideal scores and any other variable in the present study are non-interpretable. The constricted range of these $\bar{X}$ scores and the non-normality of their distributions (See Figures 5 and 6) further restrict our ability to interpret correlations based upon them. In so far as relationships between the scores of paired sets of respondents are concerned, the only tenable inference that we can make from the data is that the correlations between the three sets of Ideal scores--staff, board, and self--do not differ significantly from zero[26] Because of the restrictions we have noted, it is pointless to apply to the obtained zero order correlations corrections for overestimation and underestimation such as we have used with the LBDQ-Real scores. Because the LBDQ-Ideal scores are uniformly high, restricted in variance, and non-normally distributed, and also because they do not discriminate between subgroups of respondents within either the staff or board arrays, we conclude that questions about the degree of relationship between paired sets of

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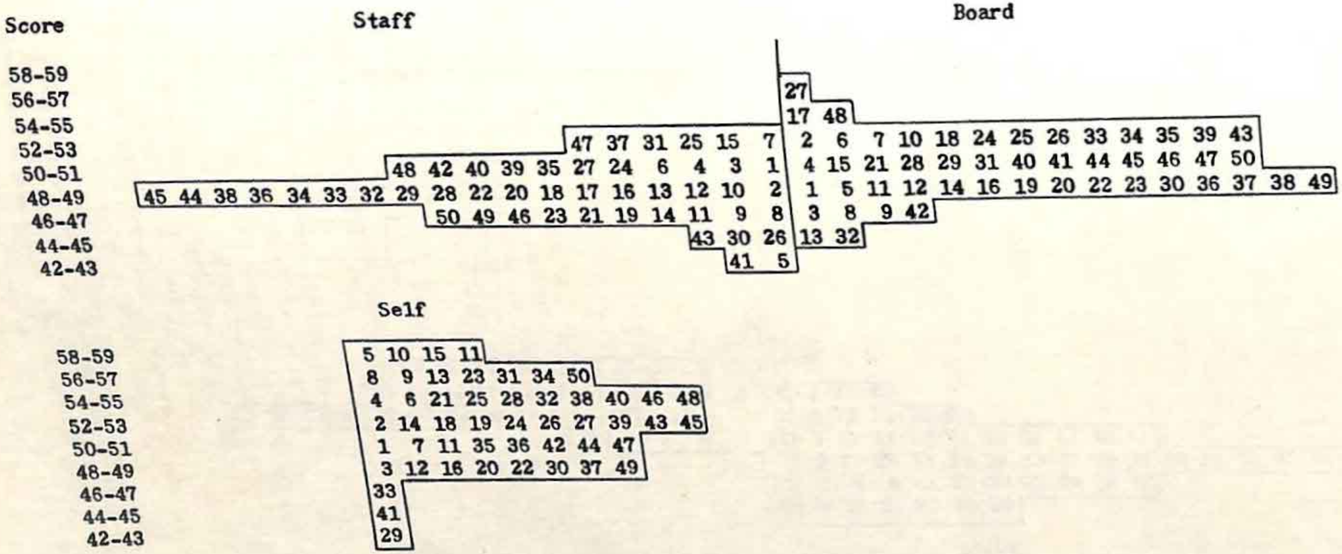
[26] The obtained correlations for Consideration are .21 for staff vs. board, .11 for staff vs. self, and .06 for board vs. self; and the corresponding Initiating Structure correlations are .09, .17, and .06.

Figure 5

Histogram of LBDQ, Consideration Ideal
Scores: Staff, Board, and Superintendent* (N = 50)



Score	Staff	Board
58-59		
56-57		27
54-55		17 48
52-53	47 37 31 25 15 7	2 6 7 10 18 24 25 26 33 34 35 39 43
50-51	48 42 40 39 35 27 24 6 4 3 1	4 15 21 28 29 31 40 41 44 45 46 47 50
48-49	45 44 38 36 34 33 32 29 28 22 20 18 17 16 13 12 10 2	1 5 11 12 14 16 19 20 22 23 30 36 37 38 49
46-47	50 49 46 23 21 19 14 11 9 8	3 8 9 42
44-45	43 30 26	13 32
42-43	41 5	

Score	Self
58-59	5 10 15 11
56-57	8 9 13 23 31 34 50
54-55	4 6 21 25 28 32 38 40 46 48
52-53	2 14 18 19 24 26 27 39 43 45
50-51	1 7 11 35 36 42 44 47
48-49	3 12 16 20 22 30 37 49
46-47	33
44-45	41
42-43	29

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*The figures in the histogram cells are the identification numbers of the individual superintendents.

Figure 6

Histogram of LBDQ, Structure Ideal
Scores: Staff, Board, and Superintendent* (N = 50)

Score	Staff	Board
54-55	25	18 25 27 38 40 50
52-53	32	2 5 6 7 12 30 33 36 39 45
50-51		3 10 16 19 20 21 22 24 26 29 34 37 46 47 48
48-49	45 40 21 16 13 11	4 13 14 15 23 28 35 41 42 44
46-47	47 46 43 41 39 38 33 30 24 20 17 12 7 6 5 3	8 11 17 32 49
44-45	49 48 42 37 36 35 29 27 19 15 8 4	9 31 43
42-43	44 31 28 26 23 22 14 10 9 2 1	1
40-41	34 18	
38-39	50	

Score	Self
54-55	11 19
52-53	3 16 45
50-51	12 15 21 35 36 37
48-49	5 6 27 40 44 48
46-47	4 13 14 34 43 49
44-45	1 8 10 17 22 23 30 38 39 50
42-43	7 9 20 24 25 26 28 31 32 33 46
40-41	2 47
38-39	18 29
36-37	41
34-35	
32-33	
30-31	42

*The figures in the histogram cells are the identification numbers of the individual superintendents.

scores are statistically meaningless and of no practical import.

Because neither staffs nor boards differ significantly among themselves in their ideology concerning a superintendent's behavior, our central question about the LBDQ-Ideal data is whether the three source groups as a whole--staffs, boards, and superintendents--differ in their leadership ideology. In brief, do these groups differ in their expectation of how a superintendent should behave on each of the two leadership dimensions? The means are given at the base of Table XI. Wilcoxon's nonparametric test (paired replicates) was used to test the significance of the difference between these means. The T values are presented in Table XVI.

Table XVI

T Values for Non-parametric Test of Difference between Leader Behavior Description Questionnaire-Ideal Scores of Staff, Board, and Self (N = 50)

	Consideration	Initiating Structure
Staff vs. board*	+225.5‡	+ 50.5‡
Staff vs. self	+ 47.0‡	+443.0†
Board vs. self	+209.0‡	-137.5‡

*A plus sign indicates that the mean score of the second member of the pair is higher; a negative sign that the mean of the second member is lower. The smaller the T value, the more significant is the difference. For N = 50, $T_{.05} \leq 434.5$; $T_{.01} \leq 370.65$; $T_{.001} \leq 341.85$.

† Significant at the .05 level of confidence.

‡ Significant at the .001 level of confidence.

The respondents from all three sources endorse high Consideration and high Initiation of Structure but differ in their expectation of how the superintendent should behave on these two dimensions. The level of Consideration which the superintendents themselves believe they should display is significantly higher than either the staffs or boards expect it to be. Interestingly enough, the staffs believe the superintendents should show less Consideration than the boards expect. In respect to Initiating Structure. the boards set the highest standard of expectation for the superintendent, the superintendents themselves the next highest, and the staffs the lowest. Although the difference between the expectations of the superintendents and their staffs is statistically significant, it is not great enough to be of practical significance.

We may summarize the findings on the LBDQ-Ideal as follows:

1. The variances in how much Consideration the different staff and board groups believe the superintendent should show differ significantly from school to school. This means that some staffs (or boards) are in essential agreement about how the superintendent should behave, while the members of others disagree markedly among themselves in what they expect.

2. The variances in how much Structure the different staff and board groups believe the superintendent should Initiate do not differ significantly from school to school. The within-group agreement is approximately the same for all staffs and for all boards.

3. The boards do not differ significantly from school to school in their expectation of how the superintendent should behave on each dimension.

4. The staffs do not differ significantly from school to school in their expectation of how much Consideration the superintendent should show, but there is a slight difference in their expectation of how much Structure he should initiate.

5. For the most part, the staff and board conceptions of how an ideal superintendent should behave do not differ from school to school. These conceptions constitute general norms of the beliefs of staffs, boards, and superintendents concerning the ideal behavior of a superintendent. All three groups of respondents characterize an ideal superintendent as one who scores high on both Consideration and Initiating Structure.

6. The superintendents set higher standards of Consideration for themselves than either the staffs or the boards set for them. The boards, in fact, expect the superintendents to show greater Consideration to their staffs than the staffs themselves posit as ideal.

7. The boards believe that a superintendent should be very strong in Initiating Structure. The superintendents themselves and the staffs both believe that

the superintendents should Initiate far less Structure than the boards expect. The staffs, in turn, prefer less Structure than the superintendents believe they should Initiate.

Comparison of the LBDQ-Real and the LBDQ-Ideal Scores

We next examine the relationship between the scores on the LBDQ-Real and the LBDQ-Ideal. The means and standard deviations for each of the three sources of respondents are compared in Table XVII, and the T values for Wilcoxon's test are listed in Table XVIII. Without exception, the Ideal scores on both dimensions are higher than the Real, and all the differences between the corresponding Real and Ideal scores are significant at the .001 level of confidence. This relationship between the Real and the Ideal scores clearly indicates the direction in which superintendents should seek to improve their leadership behavior.

Table XVII

Comparison of LBDQ-Real and LBDQ-Ideal Scores:
Staff, Board, and Self (N = 50)

	Real				Ideal			
	Consideration		Initiating Structure		Consideration		Initiating Structure	
	Mean	s	Mean	s	Mean	s	Mean	s
Staff	43.5	5.7	38.0	4.5	48.6	2.4	45.3	2.9
Board	44.8	7.3	44.5	5.8	50.1	2.5	50.1	2.9
Self	45.4	5.8	38.2	5.6	52.5	3.4	45.4	4.4

Leader Behavior Dimension Quadrants

The desirability of leadership behavior characterized by both high Consideration and high Initiation of Structure can be illustrated also by the co-ordinate method discussed in Chapter I. For each of the three respondent groups, the means on the two leader behavior dimensions (for LBDQ-Real) may be used as co-ordinates to define four quadrants. We then may allocate the LBDQ-Real scores of the fifty superintendents to these quadrants. We can also classify the LBDQ-Ideal scores on the same respondent group in respect to the

Table XVIII

T Values for Non-parametric Test* of Difference between Leader Behavior Description Questionnaire Scores--Ideal vs. Real: Staff, Board, and Self (N = 50)

	Consideration	Initiating Structure
Staff†	-34.0	- 3.0
Board	-98.5	-42.0
Self	-46.0	- 6.5

*Wilcoxon's Test.

†In every instance the Real is lower than the Ideal. All differences are significant at the .001 level of confidence. The smaller the T, the more significant is the discrepancy between the Ideal and the Real.

LBDQ-Real co-ordinates. This classification is shown for the staff LBDQ scores in Figure 7. We note, for example, that nineteen of the fifty superintendents are described by their staffs as falling into the upper-right quadrant. These nineteen superintendents who score high on both dimensions may be categorized as relatively effective leaders according to the perception of their staffs. But whereas only nineteen superintendents are perceived by their staffs as belonging in this category, forty-eight of the fifty staffs believe that this is how an Ideal superintendent *should* behave. Conversely, eight of the fifty superintendents are described in the lower left quadrant. These superintendents may be presumed to be "less effective" leaders according to the descriptions given of them by their respective staffs. Although eight superintendents are described as being "less effective" the staffs unanimously believe that an Ideal superintendent should not be lacking in effectiveness. Similar discrepancies between the Real and the Ideal may be noted in the other two quadrants. For each quadrant taken separately, the chi-square value for the difference between the Real and the Ideal is significant at the .01 level of confidence. We conclude that the perceived behavior of the fifty superintendents in respect to this quadrant classification differs significantly from the way the staffs believe superintendents should conduct themselves.

The figures in parentheses--the superintendent's code numbers--enable the superintendents who participated to identify themselves in this quadrant classification.

Figure 7

Distribution of Staff LBDQ Scores, Real and Ideal, according to Quadrants Defined by Co-ordinates of LBDQ-Real Staff Mean Scores

Consideration →

Initiating Structure ↑

Real = 12 Ideal = 2 (2, 5, 11, 17, 19, 30, 36, 37, 38, 43, 48, 49)*	Real = 19 Ideal = 48 (1, 3, 6, 8, 9, 10, 15, 16, 18, 20, 21, 25, 27, 28, 31, 35, 44, 45, 47)*
Real = 8 Ideal = 0 (4, 12, 14, 24, 26, 33, 41, 46)*	Real = 11 Ideal = 0 (7, 13, 22, 23, 29, 32, 34, 39, 40, 42, 50)*

Mean = 38

(Initiating Structure, Real, Staff)

Mean = 44

(Consideration, Real, Staff)

*Superintendents' code numbers for LBDQ-Real, Staff Scores.

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Figure 8 shows the distribution of board LBDQ scores according to this same quadrant scheme. Chi-square values were computed, separately by quadrant, for the difference between the frequency of the Real and the Ideal scores. These differences are significant at the .01 level for the two quadrants on the main diagonal. The difference for the upper left quadrant is significant at the .05 level, but that for the lower right quadrant fails of significance. We conclude that the perceived behavior of the fifty superintendents who are most effective as leaders and those who are least effective differs significantly from the ideal behavior as conceived by the boards.

Finally, in Figure 9 we present a similar analysis for the LBDQ-Self scores. The chi-square values for the differences between the incidence of the Real and the Ideal cases within each quadrant are all significant at the .01 level. We conclude that the superintendents themselves perceive a significant difference between their actual behavior and ideal behavior. Note that forty-eight of the fifty superintendents believe they should show high Consideration and high Initiation of Structure.

In interpreting the data in Figures 7, 8, and 9, two facts must be kept in mind. First, the designation of effective vs. non-effective leader behavior in terms of this quadrant scheme is based upon findings from two earlier studies: one with B-29 and B-50 crews, the other with department chairmen in a liberal arts college. We assume that these findings can be generalized to the present sample. The LBDQ-Ideal scores from staff, board, and superintendents appear to support this assumption. Strictly speaking, however, it remains an assumption until evidence is produced to demonstrate the generalizability of the earlier finding to a sample of superintendents. To demonstrate this empirically, it would be necessary to show the relationship between the LBDQ-Real scores by which superintendents are described and one or more independent criteria of effectiveness. We surmise that the findings of such a study would support the assumption we have made, but the study remains to be made. In the present context, however, we have used the categorization of scores by quadrant as an internal criterion of leadership effectiveness. It must be emphasized, therefore, that this categorization is tentative and suggestive but by no means definitive.

The second fact to be noted in interpreting the findings in Figures 7, 8, and 9 is that the quadrants are defined in each instance by the mean LBDQ scores for the particular group of respondents. No attempt has been made to adjust these means so as to make the allocation by quadrant strictly comparable for the data in all three figures. Instead, the scores for each respondent group--staff, board, and self--are analyzed in respect to its own co-ordinates.

Figure 8

Distribution of Board *LBDQ* Scores, Real and Ideal, according to Quadrants Defined by Co-ordinates of LBDQ-Real Board Mean Scores

Consideration →

↑ Initiating Structure

Real = 8 Ideal = 1 (1, 2, 5, 21, 23, 24, 36, 41)*	Real = 26 Ideal = 48 (3, 4, 6, 7, 10, 12, 15, 17, 18, 22, 26, 27, 28, 29, 30, 33, 34, 35, 37, 39, 40, 44, 45, 47, 48, 50)*
Real = 11 Ideal = 0 (8, 9, 11, 13, 14, 16, 19, 32, 42, 46, 49)*	Real = 5 Ideal = 1 (20, 25, 31, 38, 43)*

Mean = 44

(Initiating Structure, Real, Board)

Mean = 45

(Consideration, Real, Board)

*Superintendents' code numbers for LBDQ-Real, Board Scores.

Figure 9

Distribution of Self LBDQ Scores, Real and Ideal, according to Quadrants Defined by Co-ordinates of LBDQ-Real Self Mean Scores

Consideration ⟶

↑ Initiating Structure

Real = 8 Ideal = 0 (1, 2, 5, 6, 11, 16, 19, 36)*	Real = 18 Ideal = 48 (3, 4, 8, 12, 13, 14, 20, 21, 25, 28, 30, 34, 35, 37, 40, 43, 46, 49)*
Real = 11 Ideal = 0 (10, 17, 18, 26, 31, 39, 41, 42, 44, 48, 50)*	Real = 13 Ideal = 2 (7, 9, 15, 22, 23, 24, 27, 29, 32, 33, 38, 45, 47)*

Mean = 38

(Initiating Structure, Real, Self)

Mean = 45

(Consideration, Real, Self)

*Superintendents' code numbers on LBDQ-Real, Self.

With these warnings in mind, we may next examine the quadrant allocation of particular superintendents according to the description of their behavior given by both their boards and their staffs, confining our comments to the two quadrants on the principal diagonal. Eleven of the fifty superintendents, or 22 per cent of the sample, are described by their staffs and their boards as scoring high on both Consideration and Initiating Structure. The eleven are Superintendents Nos. 3, 6, 10, 15, 18, 27, 28, 35, 44, 45, and 47. Strangely enough, only three of these men, Nos. 3, 28, and 35, also describe themselves as both their staff and board describe them. Perhaps the other eight men are being unduly modest.

Only two of the fifty superintendents are described both by their staffs and their boards as scoring low on both Consideration and Initiating Structure.[27] These are Superintendents Nos. 14 and 46. It is interesting to note that both these men describe themselves in the upper-right quadrant, evidently perceiving themselves as effective leaders.

The present inquiry is just a first step in LBDQ research with school superintendents. Much more research is needed, but even at this juncture it is not premature to suggest the merit of this quadrant analysis technique as a method of evaluating the leadership effectiveness of superintendents. When board and staff differ in their quadrant allocation of the superintendent's behavior, the results are ambiguous; but in those instances where descriptions of the superintendent's behavior by both his staff and his board indicate that he can be classified in either the upper-right or lower-left quadrant, this technique appears to provide a useful criterion of leadership effectiveness.

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[27] The situation in these two instances perhaps can be accounted for by extenuating circumstances beyond the purview of the present research.

CHAPTER IV

SUMMARY AND DISCUSSION OF FINDINGS

This study of the leadership behavior of fifty Ohio school superintendents deals with two specific dimensions of leader behavior: Initiating Structure and Consideration. Initiating Structure refers to the leader's behavior in delineating the relationship between himself and members of the work-group and in endeavoring to establish well-defined patterns of organization, channels of communication, and methods of procedure. Consideration refers to behavior indicative of friendship, mutual trust, respect, and warmth in the relationship between the leader and the members of his staff. The superintendents' behavior in respect to these two dimensions of leadership behavior has been measured by means of a Leader Behavior Description Questionnaire (LBDQ-Real) on which the staff and board respondents and the superintendents themselves indicate the frequency with which the superintendent engages in specific forms of leader behavior. The leadership ideology of the members of these same three respondent groups was measured by having each respondent indicate on the LBDQ-Ideal how he believed an Ideal superintendent should behave. The items on the LBDQ-Real and the LBDQ-Ideal are identical.

The LBDQ's were administered in each community by a member of the research team. The meetings with the staff and the board were held separately but not necessarily on the same day. Each team member assured the participants that the anonymity of their answers would be protected. Although the general purpose of the study was explained to all participants, no reference whatsoever was made to the concepts of Initiating Structure and Consideration as dimensions of leader behavior.

The raw data consisted of the responses on 1,274 questionnaires divided equally between LBDQ-Real and LBDQ-Ideal. Each questionnaire was scored on the Initiating Structure and Consideration dimensions. The LBDQ-Self scores, both Real and Ideal, were secured directly from the superintendents themselves. Each of the fifty superintendents received an Initiating Structure score and a Consideration score that expressed his description of his own behavior in respect to these two dimensions. Similarly, his two LBDQ-Ideal scores indicated what he believed his behavior should be on these dimensions. The staff scores were obtained by having seven members of each superintendent's staff (i.e., members of the work-group that reported directly to him) describe his leader behavior. The average of the seven scores by which his staff members described his Initiating Structure behavior was designated as his LBDQ-Real staff score on Initiating Structure. Likewise, an LBDQ-Real staff Consideration score was computed for each superintendent. The corresponding LBDQ-Ideal staff scores were determined in the same way. Scores for the boards' descriptions of the superintendents' behavior (LBDQ-Real, board) and scores that expressed their leadership ideology (LBDQ-Ideal, board) were computed by an analogous procedure. On the average, five board-member descriptions were obtained for each superintendent.

By this procedure the responses from the 1,274 questionnaires were reduced to 600 scores, with twelve scores for each of the fifty superintendents:

1.	LBDQ-Real, Self	Initiating Structure
2.	LBDQ-Real, Self	Consideration
3.	LBDQ-Real, Staff	Initiating Structure
4.	LBDQ-Real, Staff	Consideration
5.	LBDQ-Real, Board	Initiating Structure
6.	LBDQ-Real, Board	Consideration
7.	LBDQ-Ideal, Self	Initiating Structure
8.	LBDQ-Ideal, Self	Consideration
9.	LBDQ-Ideal, Staff	Initiating Structure
10.	LBDQ-Ideal, Staff	Consideration
11.	LBDQ-Ideal, Board	Initiating Structure
12.	LBDQ-Ideal, Board	Consideration

FINDINGS

The data have been analyzed in respect to these twelve scores. The findings may be summarized as follows:

1. On each leader behavior dimension, the staff respondents tend to agree in the description of their respective superintendents. Likewise, the board respondents tend to agree in the description of their respective superintendents. Although the staff and

the board members each agree among themselves as a group in their description of the superintendent's leadership behavior, the two groups do not agree with each other. Thus, knowledge of the superintendent's leadership behavior as perceived by his board does not permit us to predict with more than chance accuracy how these same aspects of the superintendent's behavior will be perceived by the members of his immediate staff. Hence, if we intend to use descriptions of the superintendent's leadership behavior as a criterion of performance, we need to take into full account the source of the description. It is evident that such descriptions should be secured from both board and staff. Neither source by itself provides a complete description of the superintendent's behavior. We conclude from these findings that the superintendents tend to adopt different behavioral roles in dealing with the members of staff and board groups.

2. Although the boards, on the whole, show statistically significant agreement among their members in their descriptions of their superintendents' leadership behavior, this agreement is far from perfect. The unbiased correlation ratio is .52 for Initiating Structure and .63 for Consideration. This finding raises a provocative question: if board-member agreement in describing the leadership behavior of superintendents is no greater than these correlations indicate, then how much confidence can we place in an evaluation of the superintendent's effectiveness based upon board members' ratings? The same argument applies to staff member descriptions of the superintendent's behavior. Here again, the unbiased correlation ratio (.44 for each dimension), though statistically significant, reflects far less than perfect agreement.

3. In respect to Consideration, consistency in the superintendent's role behavior in dealing with the several members of his board shows only a chance association with the consistency the superintendent displays in dealing with the several members of his staff. In short, the superintendent may reveal a consistent "front" of Consideration to all members of his board, but it does not follow from this that he displays a similarly consistent "front" of Consideration to all members of his staff.

4. In respect to Consideration the superintendents do not see themselves as either their staff or boards see them. The staffs see the superintendents as showing less Consideration than they are described

as showing by either the boards or the superintendents themselves.

5. There is a significant but low correlation (.44), between the superintendents' self-descriptions and the staff members' descriptions of their Initiating Structure behavior.

6. The boards describe the superintendents as Initiating Structure to a greater extent than they are perceived as doing by either the staffs or the superintendents themselves.

7. On both dimensions, the board descriptions show only chance relationship with both the staff- and the self-descriptions. The boards tend to describe the superintendents as higher on both Consideration and Initiating Structure than they are described by the staffs, and in this sense show greater inclination than the staffs to view their superintendents as effective leaders. This suggests that the superintendents "play up to the boards"--behave, in fact, more "effectively" as leaders in dealing with their boards than in working with their own staffs. Even though the superintendent may possess good-leadership skills as evidenced in his relationship with his board, he seems inclined to "let down a little" in his dealings with his staff.

8. The boards do not differ significantly from school to school in their expectation of how the superintendent should behave on either dimension.

9. There are significant differences between boards and staffs in the extent of their agreement about how the superintendent should behave on Consideration; but in respect to Initiating Structure, the within-group agreement for boards and for staffs is approximately the same for all staffs and all boards.

10. The staffs do not differ significantly from school to school in their expectation of how much Consideration the superintendent should show, but there is a slight difference in their expectation of how much Structure he should Initiate.

11. For the most part, staff and board conceptions of how an Ideal superintendent should behave do not differ from school to school. These conceptions constitute general norms of how staffs, boards, and superintendents believe a superintendent should behave. All three groups of respondents characterize

an Ideal superintendent as one who scores high on both Consideration and Initiating Structure.

12. The superintendents set for themselves higher standards of Consideration than either the staffs or the boards set for them. The boards, in fact, expect the superintendents to show greater Consideration to their staffs than the staffs themselves posit as Ideal.

13. The boards believe that a superintendent should be very strong in Initiating Structure. The superintendents, themselves, and the staffs both believe that the superintendents should Initiate far less Structure than the boards expect. The staffs, in turn, prefer less Structure than the superintendents believe they should Initiate.

14. The perceived leadership behavior of the fifty superintendents differs significantly from the ideal behavior of a superintendent as conceived by all three respondent groups. Whereas only nineteen superintendents are described by their staffs in the "high-high" quadrant (Figure 7), forty-eight of fifty of these staffs believe that this quadrant characterizes the leadership behavior of an Ideal superintendent. Conversely, though eight of the superintendents are described in the "low-low" quadrant, the staffs unanimously agree that an Ideal superintendent would *not* behave in this fashion. Similar differences between the Real and the Ideal distributions by quadrant occur for both other respondent groups.

15. An analysis was made of the number of superintendents classified in the two quadrants on the main diagonal according to the descriptions of their behavior given by both their boards and their staffs. Eleven of the fifty superintendents (22 per cent of the sample) were described as effective leaders by both their staffs and their boards--i.e., were described as scoring high on both Consideration and Initiating Structure. On the other hand, only two of the fifty superintendents were described by both their staffs and their boards as non-effective leaders--i.e., low on both dimensions. This quadrant analysis technique provides a useful way of evaluating the leadership effectiveness of superintendents and appears especially applicable in those instances where the description of the superintendent's leadership behavior by both his staff and his board indicates that he can be classified in either the "high-high" or the "low-low" quadrant.

Discussion

The leadership ideology of board and staff members, and of the superintendents themselves, is essentially the same. Effective or desirable leadership behavior is characterized by high scores on both Initiating Structure and Consideration. Conversely, ineffective or undesirable leadership behavior is marked by low scores on both dimensions. These findings on the leadership ideology of superintendents, staff members, and board members agree with the results of an earlier Air Force study in which it was found that aircraft commanders rated effective both by superiors and crew score high on both leader behavior dimensions. These results are also consistent with Hemphill's finding that college departments with a campus reputation for being well administered are directed by chairmen who score high on both leader behavior dimensions. In short, the effective leader is one who delineates clearly the relationship between himself and the members of the group, and establishes well-defined patterns of organization, channels of communication, and ways of getting the job done, and whose behavior at the same time reflects friendship, mutual trust, respect, and warmth in the relationships between himself and the members of the group.

Although the three respondent groups of the present study all agree on this Ideal, the behavior of this sample of fifty superintendents--as described by the boards, the staffs, and the superintendents themselves--falls significantly short of the ideal. This discrepancy should not necessarily be conceived as an indictment of these superintendents; for ideals, by definition, are objectives difficult to attain. It is heartening to find that approximately one-fifth of the superintendents in the present sample approach the ideal in the eyes of their boards and staffs. At the opposite end of the scale, only four per cent of these superintendents are categorized, both by their boards and staffs, as ineffective leaders.

In what way do the superintendents tend to fall short of the ideal? On the one hand, these administrators demonstrate good leader behavior in their high Consideration for members of their staffs; but on the other, they fail to Initiate Structure to as great an extent as is probably desirable. As a group, they appear somewhat disinclined to Initiate Structure in their interaction with group members. One may speculate about possible reasons for this. In some of our discussions with administrators we have encountered a tendency to view Consideration and Initiating Structure as incompatible forms of leader behavior. Some administrators act as if they were forced to emphasize one form of behavior at the expense of the other. Yet the correlation between the LBDQ-Real dimension scores for the present sample is .23 (not significant) for staff descriptions and .61 (significant at the .01 level) for board descriptions. Hence there is nothing negative or antithetical in this interdimensional relationship.[28] The fact that the board description interdimension correlation is higher than the corresponding correlation for staff descriptions suggests that the superintendents can stress both dimensions of behavior when they believe that this is sufficiently worth their effort--especially in dealing with members of the board!

Why, then, the apparent disinclination to place similar stress upon both aspects of behavior in dealing with the staff? This reluctance may be a reflection of some of the current emphasis in education upon human relations. The human relations approach and the burgeoning interest in group dynamics have developed in part as a protest against reactionary and even authoritarian leadership styles that have prevailed in far too many school situations. In our enthusiasm for the new approach, have we perhaps swung the pendulum too far?

> In applying the "human relations" approach it is important that we do not overlook the responsibility imposed upon every official leader by the institutional realities of the formal organization of which he is a part. The official leader has a responsibility and, in fact, a contractual obligation to accomplish a specified mission, and certain aspects of this mission may be beyond the purview of decision by the immediate work group. It therefore is imperative for us to re-examine our ideas about the proper balance between "human relations," i.e. Consideration, and Initiating Structure behavior within formal organizations and to become more critical about applying generalizations adduced from experience with informal groups to groups embedded within formal hierarchical organizations. Some principles may apply to both kinds of groups, but there is insufficient research evidence to permit us to assume *a priori* that leadership styles that succeed in informal, autonomous groups will be equally effective in formally organized work-groups. (14, pp. 29-30).

The swing of the pendulum seems also to be associated with a tendency to conceive the Initiation of Structure as non-democratic. This point of view is ill-founded, for there is no necessary negative relationship between democratic leadership and the Initiation of Structure. In fact, it is our impression--and here we are speculating--that what ordinarily is referred to as democratic administration or democratic leadership is precisely what we have defined operationally as leader behavior characterized by high

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[28] Similarly, for crew descriptions of the leader behavior of 249 aircraft commanders, an interdimension correlation of .38 was found.

Initiation of Structure, and high Consideration. This we have evaluated as "effective" leadership. Where the Initiation of Structure is weak, however, it is doubtful that there exists sufficient leadership--whether democratic or non-democratic--to be dignified by the name. Democratic leadership is highly desirable; but for a leader's behavior to earn this description, it is not sufficient for the leader to be democratic--he must also demonstrate definite acts of leadership.

The present findings indicate that the superintendents differentiate their role behavior. In dealing with their boards they tend to be effective as leaders, but they are inclined to be less effective in working with their staffs. Even when superintendents possess sufficient skill to be highly effective as leaders, they often "let down" a little in dealing with their staffs. Here it is important to note that the superintendent has less frequent direct contacts with his board than with his staff. This affords him more time for planning the strategy of his behavior in working with the board; and because the board is in a stronger power position than the staff, the superintendent evidently puts this time to good use. In his relationship with his staff, on the other hand, the superintendent is frequently forced to meet exigencies, with the result that he may not have sufficient time to apply to each new problem his full potentiality for leadership.

It is difficult, but not impossible, to overcome the pressure of events. To avoid being crowded by time, many executives delegate to associates a large share of authority and responsibility. This transfer of authority is in itself, of course, an essential aspect of Initiating Structure in the interaction of group members. Hence the present findings confirm our subjective impression that far too many superintendents allow their principal responsibilities to become obscured by trivia, with the result that they abdicate their leadership role and allow themselves to degenerate into mere functionaries. Routine and perfunctory activities have a specious attractiveness because they often allay anxieties that inhere in the superintendent's leadership role, but we must avoid the mistake of confusing sheer routine activity with the productivity and creativity required for effective leadership.

The superintendent's tendency to play different roles with board and staff is revealed by the lack of relationship between the board and staff descriptions of the superintendent's leader behavior. Although the members of each of these two reference groups show statistically significant agreement in their perceptions of the superintendent's behavior, the agreement is far from perfect. This finding has important implications for research on the effectiveness of the superintendent's job performance. The salient implication concerns the use of board member ratings as the criterion of leadership effectiveness. Our findings have provided two cogent arguments against this practice. First, we have noted that the board members show considerably less than perfect agreement in simply *describing* how the superintendent behaves, a finding which casts serious doubt upon how much board-member agreement we can expect to find among independent *evaluations* of the superintendent's leadership effectiveness. This criticism applies especially to global judgments made without the benefit of a carefully constructed rating schedule of known reliability. Second, in evaluating the superintendent we must take into account information from all relevant reference groups. When the descriptions of the superintendent's behavior emanating from two relevant reference groups such as the board and staff are not significantly correlated, it is all the more imperative that data from *both* sources be examined as potential criteria. In the present study, we have not exhausted the reference groups that can furnish independent and pertinent criterion information on the superintendent's performance. We have confined our inquiry to reference groups focal to the superintendent's efforts in the internal administration of the schools. Similar studies could be developed to examine the superintendent's behavior in external administration--i.e., in community and public-relations activities.

Our findings point up the need for a multiple-criterion approach to the study of the leadership effectiveness of school superintendents. This means that we must first establish several independent, objective criteria of the superintendent's effectiveness and then determine the relationship between (a) these criteria and selected predictor variables and (b) the criteria themselves. Predictor variables can be posited readily enough. What we lack are dependable, *objective* criteria of effective school administration. Criteria, by definition, entail value-judgments. For this reason, whenever we are confronted by several criteria that do not have a high correlation with each other, a further value-judgment may be required to rank the relevance of the separate criteria. The responsibility for a judgment of this kind should rest with the board of education as the official body representing the community in matters of public education. The social scientist, as a scientist, is not required to make these value-decisions, but he can make an equally important, and perhaps even more fundamental contribution. He can demonstrate to what extent the various criteria proposed are dependable and whether they are in any way incompatible with each other. He can show, for example, that Leadership Style A is effective in terms of Criterion A, and Leadership Style B effective in respect to Criterion B. He may also note, however, that Leadership Styles A and

B are incompatible, perhaps even antithetical. For instance, the superintendent who must spend a lot of time "politicking" in the community in order to put through a salary raise for his teachers may be forced to spend so little time with his teachers that they characterize his behavior as low in Consideration. If the board or the staff should insist that the superintendent be active in securing better salaries for teachers (Criterion A), and also that he be perceived by his staff as Considerate (Criterion B), then the superintendent may be faced by a real dilemma. For if he is to be perceived as Considerate by the staff he must devote time to personal interaction with individual staff members. If this same time is demanded for community contacts to gain support for a salary increase for teachers, the superintendent has to make a choice. There are only twenty-four hours in a day, and the superintendent, like every executive, must choose how he can best allocate the time at his disposal. Under such circumstances as these, if the board demands that the superintendent satisfy both Criterion A and B, they may impose upon him an intolerable burden of role conflict. On this point, Seeman (33) has provided an illuminating discussion of role conflict and ambivalence in the leadership behavior of school superintendents. As we have said, the choice of the criteria of effective administration is a prerogative of the local community, but it should be an informed choice in which conflicting or incompatible demands upon the administrator are clearly recognized as such. It is here that research can make a trenchant contribution by furnishing dependable, objective data that will permit communities to make wiser and better-informed decisions in establishing criteria for evaluating the performance of their school superintendents.

The fact that the superintendents play a different role with their boards from that which they assume with their staffs does not necessarily imply that they are confronted by role conflict. Some administrators undoubtedly compartmentalize their behavior, and in so doing minimize the likelihood of role conflict. Others, however, may find themselves torn by what they perceive as differential expectations imposed upon them by board and staff. In the present study we have not attempted to explore the dynamics of the superintendent's behavior in the matter of role differentiation. To do this would require a clinical, case-study approach similar to that employed by Seeman (32) in a recent unpublished study. As he has clearly demonstrated, this is an important area for further research in educational administration, and one in which the methods of the present study can be used in conjunction with straightforward case-study techniques.

Until such time as we are sure of the ultimate criteria we seek, we may be wise to settle for "intermediate" criteria that have strong presumptive evidence in their favor. The LBDQ-Real scores may be construed as an intermediate criterion of this kind. Inasmuch as we lack suitable objective criteria of the effectiveness of school executives at this time, we may assume tentatively that the relationship between leader behavior dimensions scores and effectiveness which has been found in the Air Force and in higher education studies we have cited applies with equal force to school superintendents. Our present findings on leadership ideology support this assumption. If we are willing to accept it, then we may use LBDQ-Real scores secured from board and staff as an intermediate criterion for evaluating the effectiveness of the superintendent's behavior. Obviously it is a rough measure, but it does provide a first approach to the objective appraisal of leadership effectiveness. We would suggest that those who are interested in experimenting with this approach use the quadrant analysis technique that we have described.

The next immediate research task is to determine the relationship between the quadrant classification of superintendents' leadership behavior and independent "external" criteria of leadership effectiveness. This was beyond the province of the present investigation, but it is the obvious next step. The task is to test the assumption we have proposed as a working hypothesis; in short, to replicate Halpin's study (17) and Hemphill's (20)--or better yet, a combination of the two--in a public education situation.

Our findings have clear implications for the training of educational administrators to the extent that we can describe these forms of leader behavior which the board, the staff members, and the superintendents themselves, consider most desirable, and which also are the most "effective"; furthermore, we can specify the character of the role differentiation used by the superintendents vis-a-vis their boards and staffs. But at this point, about all that we can say to the trainee or to the superintendent in service is, "This is how we believe you should behave." The chief shortcoming to be found with this is that exhortation is a notoriously poor training method. Little is accomplished by merely telling trainees how they should behave; we must also establish conditions in the training situation itself that will be conducive to behavioral change in the desired direction. Training in administrative skill involves many subtleties and is a complex process. We cannot inoculate a trainee with high Consideration and high skill in Initiating Structure in the same way that we inoculate a child with the virus of the Salk vaccine. The required leadership skills must be learned, and, as with all learning, ample opportunity for practice must be provided.

In leadership training we must examine our assumptions very cautiously. It has been theorized, for example, that "human relations" training will increase the Consideration that trainees show their work-group members. But Fleishman (9) , in a study for the International Harvester Company, has demonstrated that the success of "human relations" training depends upon a variety of factors not the least of which is the "social climate" in which the trainee functions in performing his job. An orthodox human relations training program can, under some circumstances, not only fail to achieve its stated purpose, but even boomerang upon its initiators by instilling in trainees apathetic, and often negative, attitudes toward human relations objectives. In short, we cannot assume on faith that the training we conduct will achieve the purposes we have in mind. Nor can we measure the effectiveness of training by the good intentions our trainees profess. The ultimate test of the success or failure of training lies in the changes that take place in the trainees' behavior.

Evidence from the present inquiry and findings from an earlier Air Force study (16) show that the leader's description of his own leadership behavior and his concept of what his behavior should be, have little relationship to others' perceptions of his behavior. In the case of the superintendents, this is especially true in respect to Consideration. For this reason we must be extremely wary about using statements made by the trainees as an index of the success of training. What a man says about himself is not the most dependable measure of changes that have assertedly taken place in his behavior. On the other hand, changes which his direct associates perceive in his behavior would appear to constitute a suitable index of the results of training. Our present evidence indicates that the LBDQ-Real is well adapted to this purpose and can provide a reliable gauge of the superintendent's leadership behavior in respect to the Initiating Structure and Consideration dimensions. It should be possible to conduct training experiments in which the difference between the LBDQ pre-training scores and the LBDQ post-training scores is used as an indicator of change by which we can evaluate the effectiveness of the training program. This technique, however, cannot be used for pre-service training of school administrators because a dependable pre-training LBDQ measure is unobtainable. But for the in-service training of men currently employed as administrators, such a method of evaluating training should prove quite valuable. It can even provide a means for comparing the relative effectiveness of various training procedures.

In summary, then, the evidence from the present inquiry shows that effective leadership in the case of a school superintendent is characterized by high Initiation of Structure and high Consideration. These two dimensions of leader behavior represent fundamental and pertinent aspects of the superintendent's leadership skill. The LBDQ-Real provides an objective and reliable method of describing the superintendent's behavior on these two dimensions. It should be possible to train superintendents in the skills that compose these dimensions, but the methods for accomplishing this training have yet to be developed. We have noted two practical applications of the present approach: (a) the use of LBDQ-Real scores as an intermediate criterion of the leadership effectiveness of superintendents, and (b) the use of differences between pre-training and post-training LBDQ-Real scores as an index of changes in behavior attributable to specific training programs.

The dimensions of leader behavior we have delineated obviously do not exhaust the field. It would be fatuous to imply that these dimensions constitute *the* criterion of leadership effectiveness. They do not. However, they probably do represent *a* criterion that should be taken into account in evaluating the leadership skills of superintendents. Ours is only one approach to the study of the leadership behavior of school superintendents. Others are needed to supplement the point of view presented here. We have drawn heavily upon the products of earlier investigators. Perhaps others, in turn, will explore further implications of the present findings.

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APPENDIX A

Leader Behavior Description Questionnaires (Educational Administrators Adaptation)

The items are the same for the "Real" and "Ideal"--Staff, Board, and Self; but the instructions for "Real" and "Ideal" differ. The LBDQ-"Real," Staff or Board, is reproduced in toto. Next are given the instruction pages for the "Ideal," Staff or Board; and finally the instruction sheets for the "Real" and "Ideal," Self.

INSTITUTE OF EDUCATION FOR WOMEN
Dept. of Extension
SERVICE.
CALCUTTA-27

LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE

This is a questionnaire on which you may *describe* the behavior of your superintendent or executive head. Each *item* describes a specific kind of behavior without invoking any judgment about the desirability or undesirability of that behavior. These questions in no way constitute a "test" of the ability of the person who answers the items. Nor do they involve an evaluation of the effectiveness of the administrator's performance. It is possible, however, from this straightforward description of the frequency with which the administrator engages in specific kinds of behavior to identify certain distinct leadership styles.

Your answer will NOT be seen by the administrator whom you describe. This questionnaire will be scored, and the results analyzed, by a research team at the Personnel Research Board, Ohio State University. The report of findings submitted to the administrators, and to you, will preserve the anonymity of your answers.

Thank you.

(Form II - *R* - EA, 4/54)

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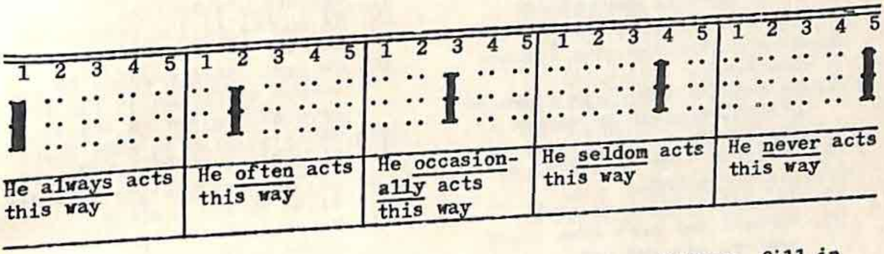
LBDQ

DIRECTIONS:

1. READ each item carefully.
2. THINK how frequently your administrator engages in the behavior described by the item. How often does he (she) act in the manner described?
3. FIND the number, on the separate answer sheet, which corresponds to the number of the item you are considering. You will note five pairs of dotted lines after each item number. Each pair of dotted lines is headed by one of the small figures: 1, 2, 3, 4, 5.
4. INDICATE your answer for each statement on the separate sheet according to the following illustration:



When blackening the space between the pairs of lines, fill in all the space with a heavy black line. BE SURE THAT YOU USE THE SPECIAL I.B.M. PENCIL PROVIDED. If you should make an error in indicating your answer, you may erase the mark you have made and then indicate the correct answer.

5. AFTER you have completed each item, proceed to the next one in order. Be sure, however, that the item number on the answer sheet corresponds in each case to the item which you are answering.
6. The term "staff" refers to the faculty, or to whatever other group unit the administrator is directly responsible for. For example, in the case of the superintendent of a large city school system, the "staff" will be the group of principals or supervisors who report directly to him.
7. You may have as much time as you require to complete this questionnaire.

THANK YOU

1. He does personal favors for staff members.
2. He makes his attitudes clear to the staff.
3. He plans programs in detail.
4. He talks about how much should be done.
5. He does little things to make it pleasant to a member of the staff.
6. He tries out his new ideas with the staff.
7. He encourages work on school problems outside of school hours.
8. He anticipates possible difficulties before they arise.
9. He is easy to understand.
10. He rules with an iron hand.
11. He stresses the need for new practices.
12. He detects the first signs of dissatisfaction or unrest in the staff.
13. He finds time to listen to staff members.
14. He criticizes poor work.
15. He asks for more than staff members can get done.
16. He recognizes the need for new practices.
17. He speaks in a manner not to be questioned.
18. He keeps to himself.
19. He looks out for the personal welfare of individual staff members.
20. He tries to increase the interest of staff members in school problems.
21. He assigns staff members to particular tasks.
22. He pushes new ways of doing things.
23. He makes decisions on major matters.
24. He dislikes trying out new ideas.
25. He works without a plan.
26. He maintains definite standards of performance.
27. He is careful about the impression he makes upon people in the community.
28. He stresses keeping up with new educational trends.
29. He resists changes in administrative procedures.
30. He "needles" staff members for greater effort.
31. He refuses to explain his actions.
32. He emphasizes the quality of work.
33. He acts without consulting his staff.
34. He is slow to accept new ideas.
35. He emphasizes the meeting of deadlines.
36. He waits for the staff to push new ideas.
37. He treats all staff members as his equals.
38. He encourages the use of uniform procedures.
39. He schedules the work to be done.
40. He asks staff members to assume extra duties for the good of the entire school.
41. He is willing to make changes.
42. He makes sure that his part in the organization is understood by all members.
43. He gets staff approval on minor matters before going ahead.
44. He resists changes in ways of doing things.
45. He is friendly and approachable.
46. He asks that staff members follow standard rules and regulations.
47. He gives short "pep talks."
48. He pushes for higher achievement levels on the state-wide tests.
49. He continually "harps upon" things that still need to be done.
50. He fails to take necessary action.
51. He makes staff members feel at ease when talking with him.
52. He lets staff members know what is expected of them.
53. He "nags" staff members who make mistakes.
54. He will cut corners to get the job done.
55. He drives home the fact that the staff has an obligation to live up to.
56. He can "make a plan work."

57. He blames the same staff members when anything goes wrong.
58. He puts suggestions made by the staff into operation.
59. He sees to it that staff members are working up to capacity.
60. He stresses getting the job done.
61. He asks staff members to subordinate personal interests to getting the job done.
62. He is aware of conflicts when they occur in the staffs.
63. He gets staff approval on important matters before going ahead.
64. He sees to it that the work of staff members is coordinated.
65. He does not know what half the staff is doing.
66. He knows whom he can depend upon to do a particular job.
67. He puts the blame where it belongs.
68. He sees to it that everything is completed on time.
69. He knows a good job from a poor one.
70. He can explain the issues clearly when problems come up.
71. He changes his approach according to the problem presented by the specific situation.
72. He gets the staff together to emphasize improving the program.
73. He insists that things be done immediately.
74. He checks to see whether jobs have been completed.
75. He expects an equal contribution from every staff member.
76. He overlooks things that aren't really important.
77. He anticipates the feelings of the staff.
78. He presents a problem as a challenge to the staff.
79. He stresses results rather than methods.
80. He keeps staff members posted on their effectiveness.

LEADERSHIP BEHAVIOR DESCRIPTION QUESTIONNAIRE

Please indicate on this questionnaire how you believe your superintendent or executive should behave as a leader. Each item describes a specific kind of leader behavior. Mark the frequency with which you believe your administrator should engage in each kind of leader behavior.

Your answers will NOT be seen by your administrator. This questionnaire will be scored, and the results analyzed by a research team at the Personnel Research Board, Ohio State University. The report of findings submitted to the administrators, and to you, will preserve the anonymity of your answers.

Thank you.

(Form XI - Id - EA, 4/54)

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LBDQ

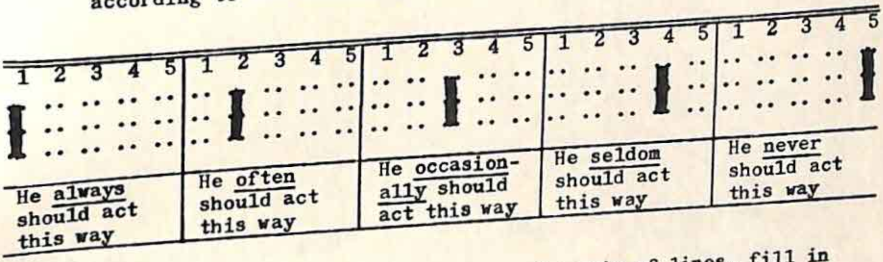
DIRECTIONS:

1. READ each item carefully.

2. THINK how frequently your administrator SHOULD engage in the behavior described by the item. How often SHOULD he act in the manner described?

3. FIND the number, on the separate answer sheet, which corresponds to the number of the item you are considering. You will note five pairs of dotted lines after each item number. Each pair of dotted lines is headed by one of the small figures: 1, 2, 3, 4, 5.

4. INDICATE your answer for each statement on the separate sheet according to the following illustration:


1 2 3 4 5
1 2 3 4 5
1 2 3 4 5
1 2 3 4 5
1 2 3 4 5
He always should act this way
He often should act this way
He occasionally should act this way
He seldom should act this way
He never should act this way

When blackening the space between the pair of lines, fill in all the space with a heavy black line. BE SURE THAT YOU USE THE SPECIAL I.B.M. PENCIL PROVIDED. If you should make an error in indicating your answer, you may erase the mark you have made and then indicate the correct answer.

5. AFTER you have completed each item, proceed to the next one in order. Be sure, however, that the item number on the answer sheet corresponds in each case to the item which you are answering.

6. The term "staff" refers to whatever group unit the administrator is directly responsible for. For example, in the case of the superintendent of a large city school system, the "staff" will be the group of principals or supervisors who report directly to him.

7. You may have as much time as you require to complete this questionnaire.

THANK YOU

LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE

Please indicate on this questionnaire how you believe you behave as a leader. Each item describes a specific kind of leader behavior. Mark the frequency with which you believe you engage in each kind of behavior.

The research team at the Personnel Research Board, Ohio State University, will preserve the anonymity of your answers.

(Form II - R-Slf - EA, 4/54)

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LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE

Please indicate on this questionnaire how you believe you SHOULD behave as a leader. Each item describes a specific kind of leader behavior. Mark the frequency with which you believe you SHOULD engage in each kind of behavior.

The research team at the Personnel Research Board, Ohio State University, will preserve the anonymity of your answers.

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APPENDIX B

Letter to Potential Participants and Original Prospectus of the Study

Dear Sir:

We should like to ask your co-operation in one more research project for the School-Community Development Study this Spring. This is a study of the "Leadership Behavior of Educational Administrators," designed by Dr. Roald F. Campbell and Dr. Andrew W. Halpin. As you know, Dr. Campbell, Professor of Education, is principally interested in the area of educational administration. Dr. Halpin, Research Associate at the Personnel Research Board, is a psychologist who has specialized in the study of leadership and group behavior, and who currently is engaged in such studies for the Air Force.

We should like to apply some of the techniques developed by the Personnel Research Board, as a part of the Ohio State University Leadership Studies, to a parallel study of the leadership behavior of educational administrators.

Enclosed are a description of the project and a statement of what is required of those who participate in it. We want to complete the field work during April and May, and intend to report the findings to you in the fall.

We sincerely appreciate your past participation in our projects, and hope that you will find this one both challenging and useful. Please return the enclosed form at your earliest convenience indicating your willingness to participate.

Thanks very much.

Cordially yours,

John A. Ramseyer
Director

The Leadership Behavior of Educational Administrators

The educational administrator is confronted by a dual leadership responsibility. He is responsible to his board of education but must also be responsive to the members of his own professional staff. Industrial and military studies have shown that leaders faced with similar dual responsibilities are often in a position of potential role conflict. Programs designed to improve the leadership skills of foremen, executives, and military officers must take into account the extent to which their superiors and subordinates confront them with different expectations of how they should behave as leaders. So far, no comparable studies have been conducted in the field of educational administration. In order to improve in-service training programs for administrators, and to develop more effective techniques for selecting and training future administrators, it would be highly desirable to obtain dependable knowledge about the leadership behavior of school superintendents and executive heads, and about the expectations which their board members and professional staffs have in respect to their leader behavior. This is the purpose of the present study, which is concerned specifically with the following five questions:

1. Do the members of the board and the members of the professional staff agree in their description of the administrator's leadership behavior?
2. Do they agree on how they expect an educational administrator to behave as a leader?
3. In what way do their descriptions of how the administrator does behave differ from the ideology of how he should behave?
4. How does the administrator himself perceive that he behaves as a leader? How does he believe that he should behave?
5. In what respect do his perceptions and expectations on this score differ from those of the board members? From those of his staff?

We shall investigate these questions by means of a Leader Behavior Description Questionnaire which has been developed by the Personnel Research Board, Ohio State University. This questionnaire is in multiple choice format, and contains eighty items, each of which describes a specific characteristic of leader behavior. The following are illustrative:

1. He is easy to understand.
2. He tries to increase the interest of staff members in staff problems.
3. He maintains definite standards of performance.

The respondent describes the behavior of the leader by marking, for each item, one of five adverbs: always, often, occasionally, sometimes, never. The respondent may also use another form of the same instrument to indicate how he believes the leader should behave.

The technique of analyzing possible differences between board members' and staff members' descriptions of the leader's behavior, and of comparing these descriptions with parallel expectations of how the leader should behave, has proved fruitful in industrial and military investigations conducted as part of The Ohio State Leadership Studies and has provided important and practical cues for improving leadership skills. This past winter, as part of an interdisciplinary seminar on "Leadership for Educational Administrators" conducted under the sponsorship of the School-Community Development Study, we have used this approach with a group of administrators who had members of their staffs describe their leadership behavior, and who also described how they believed they should behave as leaders. The comparison of these two sets of descriptions was most instructive for these administrators. They were enabled to see their own leader behavior as their staff members saw it. Furthermore, on the basis of earlier research with this same instrument, it was possible to suggest ways by which these educators could improve their leadership skills. It is our hope that similar advantages will accrue to you in return for your co-operation in this project.

In broad terms, then, the purposes of the present study are two-fold:

1. To increase our basic knowledge about the leadership behavior of educational administrators in order that we may improve in-service training programs and develop better methods of selecting and training future administrators.

2. To enable you to see your own leader behavior as the members of your board and your staff see it and to compare this perceived behavior with their expectations of how you should behave as a leader. This information will suggest to you ways by which you can improve your own leadership skills.

Plan of the Study

We plan to study a sample of approximately sixty Ohio superintendents and executive heads. We shall use two forms of the Leader Behavior Description Questionnaire (LBDQ): the LBDQ-Real on which the respondents describe how the leader behaves; and the LBDQ-Ideal on which they indicate how they believe he should behave.

We should like to secure the following information:

1. A description by each of the five members of the board of education of:
    a. How the administrator behaves - LBDQ-Real
    b. How the administrator should behave - LBDQ-Ideal

2. A description by the administrator of:
    a. How he believes he behaves - LBDQ-Real
    b. How he believes he should behave - LBDQ-Ideal

3. A description by each of nine staff members of:

a. How the administrator behaves as a leader - LBDQ-Real
b. How he believes he should behave - LBDQ-Ideal

Procedure

What does your co-operation in this study entail?

1. How much time is involved?

2. What scheduling is required?

As you will have noted, each respondent, including yourself, will be asked to fill out two questionnaires: the LBDQ-Real and the LBDQ-Ideal. Both forms of the questionnaire can be completed in from 30 to 40 minutes. A member of our staff will visit your school to administer these questionnaires to you, to the five members of your board of education, and to nine members of your staff.

How are these nine members to be chosen? It is important that we receive descriptions of your leader behavior only from those staff members who are directly responsible to you, and who have day-to-day opportunities to interact with you in a professional relationship. In some cases these will be members of a central office staff; in others, principals and supervisors; and in others, members of the teaching staff itself. The number of individuals who are directly responsible to the superintendent or executive head will vary from one community to another. Accordingly we request that you indicate on the attached sheet the names of all members of your organization who report directly to you, and who are in a position to describe your leadership behavior. From the list that you provide we shall select nine names at random, and notify you of these names in order that you may invite these nine individuals to a meeting at which the two forms of the LBDQ will be administered to them by a member of our staff. With allowance for time for introductions and questions, as well as for the questionnaire themselves, it is doubtful that this meeting will require more than one hour.

A similar meeting should be held with the members of the board of education. Again, not more than one hour will be required. In the case of the board, instead of selecting the respondents, we definitely should prefer to enlist the co-operation of all five members.

In your own case, 40 minutes should suffice for filling out both questionnaires. You probably will prefer to do this in your own office, at the same time that your staff members are describing your leader behavior.

We believe that it would be inexpedient to convene the members of your staff and the members of your board at the same meeting. For purposes of our own scheduling, however, it would be most helpful if you could arrange to have both meetings set on the same day. We suggest that we meet with the nine staff members immediately after school, and with the board members after dinner. Other arrangements are possible, and we shall be pleased to work out whatever schedule is most suitable to you.

This, then, is what is required:

1. The names of the staff members who are directly responsible to you. If you will jot down their names on the attached form, we shall select nine names at random and notify you accordingly.

2. A one-hour (maximum) meeting with these nine individuals, in the afternoon, or at whatever other time is agreeable.

3. A one-hour (maximum) meeting with the five members of your board of education, preferably scheduled on the same day as the meeting with your staff.

4. Concurrent with the meeting of your staff members, approximately 40 minutes of your own time for filling out the two forms of the questionnaire.

5. Your suggestions on the attached form concerning possible dates on which we may visit your school to carry out this program.

Feed-back

You, yourself, are at the focus of this study. It concerns your behavior and the expectations others have of you. It is therefore imperative that the findings be handled in the strictest professional confidence. How is this to be accomplished?

1. The questionnaires will be collected by one of our staff members as soon as they are completed.

2. No member of your organization will see any completed questionnaire other than those he fills out himself. This also applies to you.

3. The data will be processed at the Personnel Research Board Laboratory. Immediately upon receipts all information which pertains to you will be given a code number. Similarly, each administrator who co-operates in this study will have his own code number. Thereafter, the data will be analyzed entirely in terms of these code numbers, with absolutely no reference to the names of the individual respondents.

4. The results will be reported in terms of group trends and relationships, but each administrator, by reference to his own code number, will be able to identify the scores which pertain to himself.

5. The scores by which the individual members of your organization describe your leader behavior will not be revealed. These scores will be averaged so that you will know how the staff, as a group, perceives your leader behavior. Similarly, you will know how the members of the board, as a group, perceive your leader behavior, but you will not be able to identify any given member's description of you.

IT IS IMPERATIVE THAT THIS POINT BE MADE CLEAR TO ALL THE MEMBERS OF YOUR ORGANIZATION WHO PARTICIPATE IN THIS STUDY.

PLEASE EMPHASIZE, TOO, THAT ALL DATA, AND ESPECIALLY ALL REFERENCES TO YOU AS AN INDIVIDUAL, WILL BE TREATED IN ABSOLUTE PROFESSIONAL CONFIDENCE.

When the study has been completed and the data have been analyzed, you will be given a report on the findings. This report will describe fully the dimensions of leadership behavior upon which we shall concentrate our attention. Reference will be made to related industrial, military, and educational studies based upon this same approach, and insofar as the data permit, implications for the improvement of your own leadership skills will be indicated.

This study is sponsored by the School-Community Development Study, The Ohio State University, Dr. John A. Ramseyer, Director. The members of the research team are:

Dr. Andrew W. Halpin, Study Director, Personnel Research Board
Dr. Roald F. Campbell, Professor of Education
Mr. John O. Niederhauser, Chairman, Division of Appointments
Mrs. Carole Bare, Research Assistant, School-Community Development Study

We shall be pleased to answer any further questions you may have about the plan and procedure for this study. We appreciate your co-operation, and hope that you and the members of your organization will be able to participate in this study of the leadership behavior of educational administrators.

APPENDIX C*

Participating Superintendents
(School Year, 1954-55)

1. W. R. Bechtel, Executive Head, Salem School, Urbana.
2. Ralph Billet, Executive Head, Jacksontown School, Jacksontown.
3. G. Robert Blose, Superintendent, Mt. Gilead Schools, Mt. Gilead.
4. Harold Boles, Executive Head, Marion-Franklin School, Columbus.
5. Orin Breckenridge, Executive Head, Jackson School, Grove City.
6. R. H. Campbell, Executive Head, Westville (Mad River) School, Westville.
7. Byron H. Carmean, Superintendent, Shelby Schools, Shelby.
8. Frank Cochran, Executive Head, Lincoln (Jefferson) School, Gahanna.
9. Clifford Craig, Executive Head, Lima School, Summit Station.
10. Raymond B. Craig, Executive Head, Liberty Union School, Baltimore.
11. David O. Davis, Executive Head, Berne Union School, Sugar Grove.
12. Harold H. Eibling, Superintendent, Canton Schools, Canton.
13. Oliver H. Gibson, Executive Head, Radnor (Radnor Union) School, Radnor.
14. Maxson F. Green, Superintendent, Granville Schools, Granville.
15. Paul G. Gunnett, Superintendent, Barberton Schools, Barberton.
16. Marcus A. Hanna, Executive Head, Pickerington School, Pickerington.
17. John B. Hardin, Executive Head, Ashville-Harrison School, Ashville.
18. Joseph J. Hartley, Superintendent, London Schools, London.
19. G. A. Hartman, Superintendent, Circleville Schools, Circleville.
20. Otis C. Hatton, Superintendent, Akron Schools, Akron.
21. Walter B. Heischman, Superintendent, Upper Arlington (Columbus) Schools, Upper Arlington.
22. E. D. Jarvis, Superintendent, Bexley Schools, Bexley.
23. Robert Kalish, Executive Head, Walnut School, Millersport.
24. A. J. Kauber, Executive Head, Johnstown-Monroe School, Johnstown.
25. James Kirkpatrick, Executive Head, Hartford School, Croton.
26. Robert Latta, Superintendent, Mechanicsburg Schools, Mechanicsburg.
27. D. C. Lemmon, Superintendent, Dover Schools, Dover.
28. Stephen F. Lewis, Executive Head, Mt. Sterling School, Mt. Sterling.
29. Wendell K. Love, Executive Head, Washington School, Dublin.
30. H. C. McCord, Superintendent, Worthington Schools, Worthington.
31. Robert W. McCracken, Executive Head, Madison School, Groveport.
32. Marvin H. Miller, Executive Head, Big Walnut School, Sunbury.
33. Robert W. Moyer, Executive Head, Jackson School, Circleville.
34. Harold Nichols, Superintendent, Mt. Vernon Schools, Mt. Vernon.
35. Haskell F. Paulding, Superintendent, Minerva Schools, Minerva.
36. Dale S. Porter, Executive Head, Jefferson School, West Jefferson.
37. Thomas J. Quick, Executive Head, Utica-Washington School, Utica.
38. Virgil L. Raver, Superintendent, Ashland Schools, Ashland.
39. Russell E. Schafer, Superintendent, Alliance Schools, Alliance.
40. George C. Schultz, Executive Head, Canal-Winchester School, Canal-Winchester.

*These numbers do NOT correspond to those in Tables V and XII; nor to code number references made to individual superintendents anywhere in the text of the report.

41. William Schweikert, Executive Head, Rushville Union School, Rushville.
42. Robert E. Seward, Executive Head, Pickaway School, Circleville.
43. Paul E. Shell, Executive Head, Hanover-Toboso School, Hanover.
44. David R. Smith, Superintendent, Delaware Schools, Delaware.
45. Theodore E. Snyder, Executive Head, Scioto School, Commercial Point.
46. Loren Straight, Executive Head, Monroe School, Mt. Sterling.
47. R. B. Warner, Executive Head, Elm Valley School, Ashley.
48. Paul Wenger, Superintendent, Lancaster Schools, Lancaster.
49. Joseph S. West, Executive Head, Wayne-Woodstock School, Woodstock.
50. Glen W. Zeller, Superintendent, Uhrichsville Schools, Uhrichsville.

APPENDIX D

Interview Inquiry Form

I. Please list the names of ALL the members of your staff who are directly responsible to you and who are in a position to describe your leader behavior. In some situations, these will be the members of a central office staff; in other cases, principals and supervisors; in others, members of the teaching staff itself. You may include the names of such individuals as your secretary, the custodian, or any non-instructional personnel who report directly to you. Wherever possible, please record a minimum of nine names.

______________________ ______________________

______________________ ______________________

______________________ ______________________

______________________ ______________________

______________________ ______________________

(If more space is needed, please continue on the other side.)

II. June is an especially busy month for you. We should therefore prefer to schedule our meetings during April and May. Please circle below your first three choices of dates, marking them respectively 1, 2, and 3.

April

M	Tu.	W	Th.	F
			1	2
5	6	7	8	9
12	13	14	15	X
19	20	21	22	23
26	27	28	29	30

May

M	Tu.	W	Th.	F
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	27	28

III. What time of day would be most convenient for the meeting with the nine staff members? ____________ With the five board members? ____________

We shall confirm a time and date immediately, and let you know which member of the research team will visit your school.

PLEASE RETURN THIS FORM IN THE ATTACHED SELF-ADDRESSED ENVELOPE.
A PROMPT REPLY WILL BE APPRECIATED.

Thank you very much.

Your Name ______________________

School ______________________

Date ______________________